CONSERVATION OF SPECIES AND THE ENDANGERED RHINOCEROS

HEARING

BEFORE THE

SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE RESEARCH AND ENVIRONMENT

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY HOUSE OF REPRESENTATIVES

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CONSERVATION OF SPECIES AND THE ENDANGERED RHINOCEROS

THURSDAY, SEPTEMBER 25, 1986

House of Representatives,
Committee on Science and Technology,
Subcommittee on Natural Resources,
Agriculture Research and Environment,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:18 a.m., in room 2318, Rayburn House Office Building, Hon. James H. Scheuer (chairman of the subcommittee) presiding.

Mr. Scheuer. The Subcommittee on Natural Resources, Agriculture Research and Environment will come to order.

From time to time we have had hearings on interesting and challenging and important environmental issues. Today we're going to consider the rapid loss of the world's animal species with special emphasis on the second largest land animal, the rhinoceros, that is facing extinction and for whose salvation desperate action is needed.

Now these hearings historically have not been without constructive result. We had a hearing about a year ago about a large development project in the Amazon jungle that was rapidly displacing the native Indian tribes, that was poorly conceived, atrociously conducted, and was being done with the financing of the World Bank and was in derogation of World Bank standards.

After the hearing we sent the testimony and wrote a long letter to our Treasury representative on the World Bank and asked them to petition the World Bank to stop the project. Within a matter of months, the project was stopped. That was one of the results of congressional hearings.

These hearings are designed to educate Members of Congress, but in the case of the global environment and loss of species which have global implications, we sometimes carry our educational ventures and efforts beyond the confines of the United States with some degree of success.

Well, the rhino, the world's largest land animal, is quickly being driven to the brink of extinction. The main cause of the depredation of the existing rhino herds is for their horns, which can be ground into quack medicinal remedies or carved into ornamental dagger handles. We have pictures of the daggers over there [indicating].

There's a picture of the result of the poaching. That picture on the left, I think, is one of the more gruesome and disgusting pictures representing man's greed that I have ever seen.

So for the most superficial of reasons, for these quack medicinal remedies and for dagger handles, we're destroying these magnificent beasts, the second largest beasts on Earth.

The plight of the rhino also deserves our attention not only for itself, but for what it says about ourselves, what it says about our perception of our role in this planet, how we see the world around us and this small Earth on which we live, what it says about our ability to save any endangered species, be it animal or plant.

The rhinoceros represents an acid test for our commitment to the preservation of the world's endangered species. Here we have an animal whose destruction serves no useful economic purpose, an animal that is protected by international laws that virtually all of the nations of the world that are affected in that region have joined, and an animal that enjoys enormous support from humane and conservation groups. Yet the poachers continue to deplete the rhino herds year after bloody year.

The plight of the rhino is a metaphor for the plight of all endangered species. If we can't save the rhino, we can't save any endangered species.

We have a very distinguished witness list here today. But before the witnesses, I want to recognize two very distinguished colleagues, Jim Cooper of Tennessee and Congressman Lindsay Thomas of Georgia, and ask them if they'd like to make some opening remarks.

Mr. COOPER. Thank you, Mr. Chairman. It's my pleasure to be with you today, and I congratulate you on the distinguished work that this subcommittee is doing on this important topic.

I regret that, unfortunately, due to the legislative schedule this late in the session when we have things like the tax reform bill coming up in just a few minutes, the attendance is not necessarily representative of the true congressional interest on this subject.

I feel that certainly next year, the next session of Congress, we will have all members on board and fighting this fight, this important fight to preserve the black rhinoceros and the other endangered species.

But I congratulate you, first and foremost, for taking time out of your busy schedule at a crucial time like this to make sure the cause is not only presented to us, the Congress, but also to the American people.

Mr. SCHEUER. Thank you very much.

Lindsay.

Mr. THOMAS. Mr. Chairman, thank you for letting me sit in with you today. I see here I'm on the Subcommittee on Natural Resources, Agriculture Research and Environment. As I told you, I'm on the Subcommittee of Fish and Wildlife and Environment; Conservation and Credit; and the Agriculture Committee as well. So I feel like this is almost a mixture of all the committees I serve on.

I'm just here as an interested party, as a member of the Fish and Wildlife Subcommittee and one concerned about the future of our animals and wildlife resources all over the world today. I'm glad to have the opportunity to squeeze this into my schedule and look forward to the testimony.

Thank you for letting me sit in, Mr. Chairman.

Mr. SCHEUER. Well, I thank you both for being here. Today we are beginning the debate, and we will have the votes on the tax bill. This is probably the most important voting day of this congressional year, and it's very much to your credit that you came. We're all grateful to you.

While you have the time, we're delighted to have you with us. Since your time is limited, if you have any questions or if you have any remarks to make during the course of the testimony, you may not be able to stay until the end, please feel free to intervene and make your remarks. Make yourselves felt and ask any questions that come to mind. OK?

All right. Now before going ahead to introduce the witnesses, I do want to thank and acknowledge the group from Rhino Rescue, USA, This group is playing a very significant leadership role in educating the public about the plight of the rhinoceros and in promoting conservation efforts, including establishing and maintaining rhino sanctuaries or wildlife sanctuaries in which rhinos can live with all kinds of other breeds in peace and serenity. Indeed, the only predator of the rhino is mankind.

So we thank Rhino Rescue, USA, for assisting us with this hearing, advising us, consulting with us, and arranging for the travel of our witnesses from Kenya.

Rhino Rescue is represented by its chairman, Thomas Schneider; by the distinguished actress and trustee of Rhino Rescue, Kathryn Harrold; and by an old and trusted friend of mine and of this committee's many prior hearings and prior battles for good causes, Bob Schule.

I also want to acknowledge the presence and the participation of Daniel Sindiyo and Dr. Esmond Bradley Martin, who have come halfway around the world from Kenya to testify at these hearings. We're grateful to them. It's been a long—that's a long trip and it's tough on the old bag of bones. It was a sacrifice to come, and we're grateful.

We'll also hear from the representative of Mr. Richard Benedick of the State Department; Mr. Curtis Bohlen—the representative, Mr. Richard Benedick of the State Department; also E.V. Curtis Bohlen, vice president of the World Wildlife Fund; Mr. Jack Hanna from the Columbus Zoo, Columbus, OH; and Edward Maruska from the Cincinnati Zoo, Cincinnati, OH.

Ohio is making a significant contribution here today. I wish we had some representation of our colleagues from Ohio.

I hope that Claudine Schneider, our distinguished ranking Republican, will be able to make it. She's vitally interested in this subject. If she can make it, she'll be here.

We would like for our first speaker now, Mr. Edmund Parsons, Office Director of the Office of Ecology and Natural Resources, Bureau of Oceans, International Environment and Scientific Affairs, U.S. Department of State, representing Richard Benedick, who's an old and valued friend of ours and who's testified before this subcommittee and this full committee on many occasions.

Mr. Parsons, why don't you chat with us informally for 6 or 7 or 8 minutes, preferably not reading your testimony but just chatting informally as if you were in our living room, and then we'll have some questions for you.

STATEMENT OF EDMUND PARSONS, OFFICE DIRECTOR, OFFICE OF ECOLOGY AND NATURAL RESOURCES, BUREAU OF OCEANS, INTERNATIONAL ENVIRONMENT AND SCIENTIFIC AFFAIRS, U.S. DEPARTMENT OF STATE, REPRESENTING RICHARD ELLIOT BENEDICK, DEPUTY ASSISTANT SECRETARY OF STATE, ACCOMPANIED BY DAVID TROTTER

Mr. Parsons. Thank you very much, Mr. Chairman.

It's an honor, indeed, for me to be here amongst this group of distinguished witnesses that will appear after me.

As you know, I've come recently from Rome, where we last met, where I was the deputy to Ambassador Fenwick, U.S. Ambassador to the FAO and a former Member herself of the House.

I have now come into this new, important position, and among the few things that have impressed me most has been the plight of the rhino. In preparation for this hearing, I have had the opportunity to spend some time reading into the subject and am convinced, as you have stated, that this is one of the biggest challenges confronting us now in preservation of wildlife.

A formal statement has been submitted to the committee, and I have a summary from which I was going to read but, as you've requested, I will just chat with you informally now at this time.

I do think that I should point out that in our reading of the data one of the things that we can most effectively focus on is the marketplace. And by this, I would look at the supply side of the market and the demand side.

We then have to in the State Department think of where we can most effectively be of assistance in stamping out the trade of rhinoceros products. In fact, over the past few years we have made attempts, considerable attempts, toward this end. We have made representations to a number of countries to encourage them to stop the trade in rhino and rhino products. We have encouraged countries to join CITES, which is the principal international arrangement on this topic. CITES stands for the Convention on International Trade In Endangered Species of Wild Flora and Fauna.

We have actively pursued our membership in that organization and we note that now there are 92 members of CITES. CITES was set up in 1973 largely as a result of legislation that was passed by the U.S. Congress.

It is an effective organization. We do, however, have some problems with specific countries and we must continue our efforts in approaching those countries.

Specifically, I've noted that over 50 percent of rhino horn goes to North Yemen for making these daggers that we see pictures of here, and we have other problems in the Far East, specifically with Singapore, which is a significant trading nation for rhino products.

It is our intention to continue our representation to these countries to see that effective trade bans are put into place. In fact, in Yemen there is a trade ban but it seems not to be effective.

Also, it has been our privilege to be of assistance to concerned individuals around the globe in visiting these countries. We've been pleased to assist them in meeting the appropriate authorities in Africa and Asian countries, and we intend to continue doing so. In fact, as a result of your hearing, Mr. Chairman, I've had some discussions with these gentlemen, many of whom are here now before you.

And I think we have laid a firm groundwork for continuation of our efforts in this area, and I understand, Mr. Chairman, that you, yourself, plan a trip to Asia. I look forward to our future discussions with you so that we might be of assistance to you in this regard.

[The prepared statement of Mr. Benedick follows:]

STATEMENT BY
THE HONORABLE
RICHARD ELLIOT BENEDICK
DEPUTY ASSISTANT SECRETARY OF STATE FOR
ENVIRONMENT, HEALTH AND NATURAL RESOURCES
BEFORE
THE SUBCOMMITTEE ON NATURAL RESOURCES,
AGRICULTURE RESEARCH AND ENVIRONMENT
COMMITTEE ON SCIENCE AND TECHNOLOGY
HOUSE OF REPRESENTATIVES
SEPTEMBER 25, 1986

Mr. Chairman,

The Department of State considers international conservation of rare and endangered species to be an extremely important and pressing problem. The plight of the rhinoceros is a graphic example of many factors which influence the process of extinction.

All five species of rhinos have suffered population declines within the past 15 years and now total approximately 9,400 in number. While the Southern White Rhino population in South Africa is recovering, the Black and Northern White of Africa and three Asian rhino species continue to suffer serious declines. Cultural myths, market values, human population pressures, competing governmental priorities and reproductive biological cycles work against the rhinos' survival.

In contrast, public concern and interest voiced domestically and internationally through governmental and nongovernmental organizations (NGO's), the media and legislative bodies have focused attention and stimulated action throughout the world. The picture is sobering, but not without hope.

The United States is acknowledged to be the world's leader in both governmental and private sector efforts to foster and contribute to international conservation of wildlife and its habitats. As a nation, the U.S. is signatory to 14 international and regional conventions and treaties on wildlife and marine resources. Our financial contributions to most international organizations in the wildlife resources arena, e.g., the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the United Nations Environment Program and the World Heritage Convention, are amongst the highest.

At the same time, the United States is also one of the major consumers of wildlife and wildlife products. According to official trade records, the total declared average value of U.S. trade in wildlife was between $800 million and $1 billion during the period 1980-1984. This figure is undoubtedly understated as live animal imports are sometimes falsely described and undervalued to avoid tariffs and duties and smuggled wildlife is never declared.

The Department of State, the US Fish and Wildlife Service (FWS), the Justice Department and the US Customs Service are all active in the protection of wildlife. The Department of State and its missions abroad have been concerned with the plight of the rhinoceros since 1980. This subject and other wildlife issues are among the most visible in the Department's portfolio and are continually subject to scrutiny and comment. The Department has made representations at all levels to host country officials throughout Africa, the Middle East and East Asia on rhinoceros. North Yemen, Malaysia, Hong Kong, Taiwan, South Korea, and Singapore are just a few of the many countries to whom we have made diplomatic approaches.

Last year, Dr. Esmond Bradley Martin approached our Embassy in Nairobi for assistance in his campaign to save the rhinos. In response to his request, our missions in East Asia arranged appointments, provided translation services and delivered other administrative assistance throughout his subsequent trip to confer with officials in countries that consume rhino horn. The issue of importation of rhino horns into North Yemen was raised this summer by our ambassador in a call on the Deputy Foreign Minister. Our Embassy in Sanaa is also assisting in Dr. Martin's upcoming trip there this fall. In June of this year, William Turner, World Wildlife Fund (WWF) board member, requested assistance from the State Department and our embassy in Seoul in meeting with South Korean officials to discuss trade in rhino horn and accession to CITES. The reporting cable on the meeting indicated that South Korea is committed to its ban against the importation of rhino horns and is actively working on a mechanism with which to implement CITES requirements within South Korea.

The Fish and Wildlife Service's Office of the Scientific Authority (OSA) and Wildlife Permit Office (WPO) serve respectively as U.S. Scientific Authority (SA) and Management Authority (MA) for CITES. OSA is in contact with other national scientific authorities on a wide range of species determinations and listings in the CITES appendices and advises WPO on whether permitting a particular type of international trade activity (commercial or non-commercial) would be deterimental to individual species in the wild. WPO receives permit applications, coordinates their review and determines whether a permit or certificate should be issued. The Management Authority is responsible for implementing CITES in the United States. In order to do so, it maintains close coordination with the CITES Secretariat, wildlife officials of many other countries and NGO's in the United States and abroad. Officers of the Fish and Wildlife Service and the Department of State represent the United States at biennial CITES Conferences of the Parties and in meetings of that organization's Technical and Standing Committees.

The Law Enforcement Office (LE) of the Fish and Wildlife Service is responsible for enforcement of U.S. legislation within our borders. Special agents and wildlife inspectors at the designated ports of entry inspect shipments, seize illegal items and prosecute violators, publicize trade bans as well as conduct law enforcement seminars abroad. Department of State officers work closely and productively with all the FWS offices cited.

The Justice Department works closely with foreign agencies, through the Department of State and in cooperation with FWS/LE, in prosecution of international wildlife cases. Attorneys undertake investigative missions to foreign countries and contact foreign embassies and US Embassies through the Department of State to develop evidence and testimony. This cooperation has resulted in several recent successful court actions, e.g., Saudi Arabian peregrine falcon prosecution and black palm cockatoo forfeiture.

The US Customs Service is involved in examination of packages and conducts seminars in countries around the world on identifying possible illegal packages and shipments. It should be recognized that the U.S. is not a major importer, exporter or consumer of rhino by-products. However, earlier this year the Customs Service detected and began intercepting some packages shipped to U.S. residents containing rhino products (horns, toenails, blood) at international mail facilities in Seattle, New York and San Francisco. State, FWS/LE and Customs are currently working closely in the ongoing investigation with the foreign government concerned to stop this illicit trafficking.

The Lacey Act of 1900 was among the first pieces of national legislation implemented to protect wild species in the world. Originally intended to control market hunting, hunting large amounts of wildlife for sale, involving interstate traffic in wild meats and wildlife products, Congressman Lacey's concept "to take away the market" is as valid a premise today as it was then. The Amendments to the Lacey Act in 1981 have been instrumental in USFWS/LE and the Justice Department's seizure of contraband and prosecution of illegal wildlife cases. The prohibition on international trade or trafficking of fish and wildlife in foreign commerce taken, possessed, transported or sold in violation of any foreign law is regarded as the long arm of the Lacey Act. No longer must the USG prove that the importers knew that their activities were illegal in order to forfeit wildlife. Now if the wildlife in question was in fact taken, possessed, etc., in violation of the foreign law, then the wildlife is subject to forfeiture. The Department of State and its embassies abroad often secure from foreign officials affidavits and certifications of foreign wildlife or conservation laws that are needed in order to prosecute violators of U.S. laws.

The Endangered Species Act of 1973, which superseded the Acts of 1966 and 1969, gave the US one of the most far reaching laws ever enacted by any country to prevent the extinction of endangered animals and plants. All species of rhinoceros, except the Black and Southern White Rhinos, were listed as endangered in 1970. The Black Rhino was listed in 1980. Under the law, the FWS has broad powers to protect and conserve wildlife and plants which are threatened with or are in endanger of extinction. The State Department is often called upon to assist the FWS Office of Endangered Species in eliciting foreign government comments in cases in which a proposed action to list or delist a species involves foreign and migratory species. The Department just last month requested assistance from all our missions in Africa to collect data on the status of the Nile crocodile, which is being considered for reclassification from endangered to threatened. Species listed under the ESA may not be imported into or exported from the U.S. even if they are not listed in other countries. Foreign governments have indicated an interest in using the ESA as a model for wildlife conservation legislation. ESA is also the implementing legislation for CITES.

In passing the Endangered Species Conservation Act of 1969, Congress directed the Departments of State and Interior to convene a ministerial conference to conclude an international convention on wildlife trade. Also known as the Washington Convention and concluded in 1973, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has become the preeminent international wildlife conservation convention, with 92 contractual parties to date. Appendix I includes species seriously threatened with extinction (e.g., rhinos, tigers, giant pandas). The Convention's most stringent regulations are directed at commercial trade involving these animals and plants. Appendix II lists all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulations (e.g., elephants and American ginseng). It also lists species which due to similiarity of appearance need to be under strict regulations in order that trade can be effectively controlled (e.g., the North American bobcat and lynx). Appendix III includes species, not listed in Appendix I or II, which individual parties identify as being subject to regulation within their jurisdiction and for which they seek the cooperation of other parties in the control of trade. Rhinos have been classified as Appendix I animals since the inception of CITES in 1973.

The Department of State has consistently supported CITES and Department officers were substantially involved in the negotiation and conclusion of the Convention in 1973. Preparation, inter-agency coordination and negotiation of U.S. policy and positions relating especially to the administration and financing of the Convention are the responsibility of the Department of State. We provide assistance to other agencies on implementation of U.S. obligations under CITES and serve on U.S. delegations to Conference and Committee meetings. U.S. diplomatic missions often facilitate communication between the CITES Secretariat and host countries when commercial communications cannot be completed, when the issues are too sensitive for telex or open mail, or when the Department is directly concerned.

For example, Singapore is not a party to CITES and has not implemented a ban on the importation of rhino horn. Our Embassy has made diplomatic representations on both accession to the treaty and an importation ban on rhino horn products to the Singapore Government. Our efforts, unfortunately, have not been as successful as we wish. We were informed by the Government of Singapore that imports of rhino horn were insufficient to justify a separate listing as a trade item on official records and that the Government is looking into the question of accession to CITES.

Even though cultural myths suggests that rhino horn is an aphrodisiac, most Asian countries utilize powdered rhino horn as a fever reducing medicine. The World Wildlife Fund and the International Union for Conservation of Nature and Natural Resources (IUCN) sponsored a study by Hoffman-Laroche and Company (a pharmaceutical group) which found no evidence that rhino horn has any medicinal effect as an anti-pyretic. Tests also demonstrated that rhino horn contains no analgesic, anti-inflammatory, anti-spasmodic, diuretic or bactericidal properties. Despite such scientific evidence, rhino horn ground into powder is still used for medicinal purposes in Asia. Asian rhino horn species fetch the highest prices as they are considered the most effective.

NGO's have made profound inroads in securing bans on rhino trade and in wildlife conservation issues in general. In many ways, U.S. NGO's complement governmental efforts to conserve international wildlife throughout the world.

The African Wildlife Foundation (AWF) almost single-handedly secured the North Yemen Government's 1982 ban on the importation of rhino products. AWF raised this matter with the North Yemen Ambassador to the U.S. and was the driving force behind a mass postcard campaign to the Yemeni Prime

Minister which resulted in the ban. In hindsight, however, the success must be viewed as limited. Despite the ban North Yemen is still reputed to be the world's largest single consumer of rhino horn. Yemeni males traditionally wear daggers called 'djambias' with handles fashioned from rhino horn as a symbol of manhood. These daggers are valued at $300-$13,000. The primary smuggling routes are across the desert from Saudi Arabia and across the Red Sea from Djibouti.

The World Wildlife Fund (WWF), as previously mentioned, petitions governments to accede to CITES and ban the trade of rhino horn, sponsors scientific studies and enlists world leaders in campaign efforts. Our working relations with WWF can be considered very close and productive. We often turn to WWF's TRAFFIC (U.S.A.) for current trade and population statistics.

The IUCN Species Survival Commission's (SSC) - African Elephant and Rhino Specialist Group last held a meeting in July 1986 at which a revised action plan was agreed upon. This group has moved Black Rhino populations to top priority for conservation action. In December 1984, IUCN endorsed a Sumatran Rhino Conservation plan. The ad hoc group of experts reached a consensus on an integrated and coordinated approach to Sumatran rhino conservation that comprehensively accommodates in situ conservation needs as well as captive breeding measures in both the countries of origin and in North America and the United Kingdom.

Captive breeding programs for certain species may help to stabilize population levels of endangered animals. The results with rhinos is currently mixed at best. Breeding programs of Southern White Rhinos are currently being carried out in South Africa, the United States, Canada and the United Kingdom with very good success. With the exception of the Southern White Rhino, space requirements are a crucial factor for breeding rhinos. The male rhino is a territorial animal, who does not mate readily when in close proximity to other males. Males do not reach reproductive maturity until seven to eight years of age. The reproductive cycle of females is approximately three years from conception to weaning. Females are not biologically capable of reproduction before five to seven years of age. As a result of their slow breeding cycles, in situ conservation has appeared to be most advantageous for the survival of most rhino species.

Host country roles, of course, are vital to rescuing the rhino from extinction. Africa was once described as a sea of animals surrounding little pockets of human populations. Today the reverse is true. In the face of droughts, food shortages and human-population problems, governmental bodies find it difficult to give high priority to wildlife needs. Yet, African and Asian nations clearly recognize the importance of wildlife conservation and the preservation of rhino populations. Game reserves have been set aside and acreage increased, anti-poaching measures established and equipment purchased.

Countries which import rhino horn products often contend that more should be done at the source. However, the lucrative market for rhino horns makes poaching a very profitable business. White rhinos produce the heaviest horns, followed by Black, Indian, Javan and Sumatran rhinos. Their market value is practically in reverse order. Asian horns command the most money, approximately $6,000 to $9,000 per kilogram, while the African horns are valued between $1500 and $2000. These enormous prices create strong incentives for poaching.

As a nation, the United States has been deeply involved in international wildlife conservation and protection of rhinos. From the 1973 negotiation of CITES, to the present on-going diplomatic and public efforts to ban the trade in rhinoceros products, international wildlife conservation has been an important component of our foreign policy efforts. Cutting off the market can be one effective means of preserving the rhinoceros. The State Department and all other USG agencies involved in international wildlife conservation will continue to strive to enforce our domestic legislation and to meet our international obligations. We will continue to pursue the goals of a market place free of rhinoceros products and a steady population of both African and Asian rhinos.

Thank you Mr. Chairman.

Mr. Scheuer. This subcommittee is going to Asia, going to China in November, and we'll have 12 or 13 Members of Congress along. Yes, we would very much like to make some representations to the Chinese Government and perhaps to the Government of Singapore either coming or going. I'll ask you some questions about that.

In deference to my colleagues whose time may be short, I'm going to ask them if they would like to ask any questions.

Excuse me. Were you finished?

Mr. Parsons. Yes, sir.

I have with me, Mr. Chairman, Mr. Trotter from our office who has the advantage of being in the office longer than I and also has been following CITES very closely. He may be of assistance in answering some technical questions.

Mr. Scheuer. Good.

Let me take the opportunity of introducing Congressman Paul Henry of Michigan, one of our very hard-working members.

Paul, I'll get to you in a moment.

Jim Cooper.

Mr. Cooper. Thank you, Mr. Chairman.

I don't want to be too strong in my remarks, but it seems like since 1973 when CITES was first implemented that very little improvement has occurred. In fact, it's arguable the situation has worsened. I wonder if we're not getting a lot of lipservice from groups like the State Department and very little real action. It's my understanding that Singapore is one of our largest trading partners. I don't know of our relationship with Northern Yemen, but it seems to me if we did make a strong effort that a country with the size and leverage of the United States could see some real action and some real improvement in this situation instead of a lot of talk.

What's your reaction to a more vigorous, forceful approach?

Mr. Parsons. Well, in looking at statistics, I have to agree with you—the facts do show that the rhino population has been decreasing dramatically, drastically, tragically. It's down now to 9,000, between an estimated 9,000 and 10,000 individuals and five species. That's down——

Mr. Scheuer. Excuse me. Could you pull your mike toward you?

Mr. Parsons. Sure.

The rhino population is down now to an estimated 9,000-10,000 worldwide of five species. This is down in 15 years by about 75 [1] percent. The earlier estimates were around 80,000 to 90,000 individuals. So certainly the facts would indicate that much more needs to be done; that in fact we are not turning a corner. Hopefully, we are beginning because, as I understand it, the southern white rhino now is increasing in population.

Now in terms of the specific problems with Yemen and Singapore, I would agree. I think we have to continue and perhaps do more.

Mr. Cooper. What could Congress do to help you be more vigorous and forceful?

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[1] Mr. Parsons wrote the subcommittee saying the correct figure is 88 percent.

Mr. PARSONS. Having this hearing I think is going to help us immensely. Having the individuals here behind me know that Congress, the U.S. Congress, is interested in this will help us, and it will help us in encouraging our missions overseas to take action.

The travel of the committee will also be of immense value as the committee members, including the chairman, themselves go visit these countries and talk with the foreign leaders so that they indeed know we're serious about protecting the rhino.

Mr. COOPER. Thank you, Mr. Chairman.

Mr. SCHEUER. Mr. Thomas.

Mr. THOMAS. Thank you, Mr. Chairman.

I'm just interested in our whole area of trade talks and negotiations with other countries where we're now hopefully going to get the GATT opened up again next year. We seem to have a hodgepodge manner, sort of a shotgun manner of discussing different issues, but where do issues involved with trade and traffic in products from endangered species—where do they fit? Do they come in any of these other broad agreements and negotiations we have with other countries or are we doing it in a vacuum? I mean is it there with no support from any other areas of trade that we're negotiating?

Mr. PARSONS. The discussions of trade and endangered species come under different legislation and, in fact, we have in the Department of the Interior and the Fish and Wildlife Service the ability to ban trade in endangered species under the Endangered Species Act. That for the United States is where we do take action. We don't deal with these issues in the GATT forum. We deal with trade in endangered species internationally through the CITES.

Mr. THOMAS. What if we decide to tie this into any other kind of action or reaction from our Government? Then what—if we're trading steel and agricultural, automobiles and some of these other things—we talked about balance in those products and we talk about tariffs and duties to make this equitable, but my point I was trying to get to—I know it's kind of vague—is what reciprocation or what action, retaliatory action can we take if we find a nation that's not upholding the agreements that we have with them on endangered species?

Mr. PARSONS. As far as tying trade in endangered species with the GATT negotiation, it's a subject that I would have to look into——

Mr. THOMAS. Very little as far as you know is the point I was getting at.

Mr. PARSONS. Right.

Mr. THOMAS. Just one other question. I visited our customs house on our port in Georgia. I've yet to see any rhino horn there, but I've seen products from endangered species—pelts, skins, and other things. But I seem to sense that other countries take the same attitude. That's one of the great problems we have in trying to preserve wildlife species around the world—that is that the killing of animal is something different. Judges are notorious for turning them out of court. They'll call and say, "Oh, Judge, old buddy, you know, this was just an animal out here. I didn't mean to do it." So they're off the hook. This goes on. It has for time immemorial.

I know that in Africa many of the native issues there have arisen around native poaching. National Geographic just did a special on it a few weeks ago that we saw.

There's just a different attitude and mindset. But I really wonder here where we have laws at a customs port that really affect or deal to some degree with traffic into this country, I wonder if other countries simply don't take a different attitude and have a different mindset about these products such as rhino horn and pelts from—whether it's a snow leopard or whatever it might be for that matter, and if that really isn't the real problem we're up against here.

Mr. PARSONS. I think you're very right, Mr. Congressman. The cultural differences that we face are a major problem that we have. They view these things differently than we do on the one hand, and on the other hand there is a higher level of corruption that we have to deal with. So that the two problems together are a very major one in enforcing our desire to protect endangered species. You're quite right.

Mr. THOMAS. Thank you, sir.

Thank you, Mr. Chairman.

Mr. SCHEUER. Thank you.

Congressman Paul Henry of Michigan?

Mr. HENRY. Thank you, Mr. Chairman.

Let me simply say that I appreciate your calling a hearing on this deeply. As you know, I was formerly a Peace Corps volunteer in east Africa and had the privilege of seeing these beasts out in the wild.

I have to say as I said to staff and to my own staff in my office, that I was absolutely unaware of the magnitude and severity of the crisis here.

So I have to say first of all to the people who will be on our next panel from Rhino Rescue they're doing us a very important service in terms of raising visibility of the issue; even to someone such as myself who still communicates with people there on a regular basis and one who is unaware of the issue.

Second, and I would follow up as the chairman has indicated already, you're likely to get caught pretty quickly because some of the business before the floor today that's going to drag us out of here early.

By alerting us to the issue, if you can make every conceivable effort to follow up with those of us you have informed so we can advise our colleagues when trade legislation and commerce legislation is coming through this Congress to attach these issues to some of these bills. Quite frankly, they're exotic enough in terms of the public perception to very quickly, I think, ignite public opinion and generate public interest and do some public education on the issue.

To the average person it sounds kind of crazy that a rhinoceros issue gets put on a trade bill, but in fact when it is, everyone is going to notice. And I think many of us would like to work with you.

Rather than prolong my comments at this point, I think we ought to use our limited time to hear the panels.

Thank you, Mr. Chairman.

Mr. SCHEUER. Thank you very much, Paul.

Let me ask—well, let me just put a footnote on the question my colleagues raise—this unused clout of ours. Take Singapore, for example. We import about 4 billion dollars' worth of Singaporean goods, and we export about $3.4 billion. So we are their No. 1 trade partner in the world and we have a trade deficit with them of about $600 million.

We have a duty-free trade relationship with them with the Most Favored Nations Treaty. We import about $2.7 million of their wildlife—parakeets and what else? My staff tells me parakeets and other kinds of wildlife. That was extremely helpful. [Laughter.]

What's with us that we can't twist a few arms over there? Prime Minister Lee of Singapore is one of the most brilliant, most effective, hard-hitting and tough-minded chiefs of state in the world. It seems to me with our country buying 4 billion dollars' worth of Singaporean goods and selling them $3.4 billion, with a $600 million trade deficit, that ought to get us attention.

He could turn this thing off with the stroke of a pen. He could turn off Singapore's role as an intermediary, as a transit, as a little transit island. Why don't we tell him that we'd like him very much to do it?

Mr. PARSONS. The Fish and Wildlife Service last year had a problem with the Philippines. They cut off trade in animal products with them, and within 4 days the Philipines corrected the situation.

With the size of the trade in animal species——

Mr. SCHEUER. We twirp like a 600-pound canary. [Laughter.]

Mr. PARSONS [continuing]. I think that an action along those lines would get their attention also. There has been some discussion of doing this.

Mr. SCHEUER. How do we get it out of the discussion stage?

Mr. PARSONS. I'm reminded that the Interior Department is actively pursuing this and will shortly do something on the issue.

Mr. COOPER. Mr. Chairman, if I may interrupt at this point. I like to apply the sleep test to things. You're head of the Office of Ecology and Natural Resources, et cetera. Can you really sleep that well at night knowing that so little is being done and that the situation is worsening every day. In your testimony I've heard words like you're making "representations" and you're "encouraging." I think I would like to know personally, Does or does not George Shultz care about it? Is he doing anything about it? A simple phone call might make a difference. If the Philippines could turn around in 4 days, my bet would be the Singapore folks could turn around in a week.

Mr. SCHEUER. Maybe 2 days. [Laughter.]

Incidentally, Singapore has a very smart, very effective, very capable ambassador here in Washington, Tommy Koh. I suspect if there was one phone conversation between Secretary Shultz and Ambassador Koh, you might see action coming from one reasonably firm phone conversation emanating from Secretary Shultz' office. We'd like to see that happen.

Mr. PARSONS. I have the message very clearly.

Mr. SCHEUER. OK. In that case—we have a quorum call. We'll work for a little while. We're probably going to have a rollcall vote after the forum call. Yes, we have 15 minutes. That's why I say we'll go ahead.

Let me ask—what action has the State Department taken to encourage Singapore to sign the CITES treaty, the Convention on Trade and Endangered Species treaty? What concrete, hard, diplomatic pressure have we put, laid on Singapore to get them to sign on the dotted line?

Mr. PARSONS. Mr. Chairman, with the committee's permission, I'd like to ask Mr. Trotter to address that.

Mr. SCHEUER. Yes.

Mr. TROTTER. Thank you. Excuse me. Thank you, Mr. Chairman.

The State Department has made, our embassy has made representations to the Government over a long period of time now—I've only been in this office for a half year; I believe it's at least over the last year—regarding joining CITES. Those representations, I'm certain, began long before a year ago, but in particular this last year over the wildlife trade that goes through Singapore. Singapore appears to be a transit point for shipping wildlife that is obtained illegally in other countries, endangered species, and then shipping them on through other export permits to the United States and other part of the world.

The embassy has made a number of representations based on the consultations with the Interior Department, the Fish and Wildlife Service who are responsible for enforcing the Endangered Species Act. So over time we have made a number of representations to encourage the membership in CITES, to encourage them to cease the trade in rhino horn.

If I may add, Mr. Chairman, the question was raised earlier about what the Congress could do to help this effort, and there was an implication also that the CITES is not as an effective convention as we'd like to see. I don't think there's anyone in this room who would argue that CITES is as effective as we would like it to be or as nearly as effective as we'd like it to be. I can attest that there are strong efforts, honest efforts being made by individuals from many countries to strengthen that. One of the big problems is funding, and the United States this year gave $172,000 total to our contribution to the running of the Secretariat of CITES. That's a little below our pledge level which is based on a U.N. formula.

Mr. SCHEUER. Listen, you're getting too far into the details.

Mr. TROTTER. Excuse me, sir.

Mr. SCHEUER. We want you to lay it on Singapore. We admire them very much. They're a friendly nation. They stand for a lot of things that we stand for in Asia. Prime Minister Lee is one of the outstanding chiefs of state in the world. We think they'd be responsive if our State Department laid it on them. OK?

Now let's talk about North Yemen for a moment. We give them $33 million of development and Public Law 480 aid, $33 million. That's a lot of money to North Yemen. Why haven't we laid it on North Yemen, if we haven't? If we have, please tell us.

Mr. PARSONS. Mr. Chairman, we have, although the effect of that is yet to be seen. We have—it was either the ambassador or the chargee—gone in to see the leaders of that country on this matter. We have facilitated the visits of various experts including Dr. Martin here to North Yemen. We have been quite active in this area, although again the bottom line, as I know the members and you will point out, is yet to be seen.

They have, in fact—I believe it was last year or the year before—put into effect a ban on the import of rhino at the instigation of many. Of course, as we know, that ban is not yet effective.

Mr. SCHEUER. Well, it isn't enforced at all, as I understand it; is it?

Mr. PARSONS. If it is, it's not being effectively enforced.

Mr. SCHEUER. Is there something we can do to twist a few arms to get some more steam into the effective enforcement of that ban? We should have clout with them. We're giving them 33 million bucks a year. For a comparatively small country, that's a significant assistance to them and to their economy.

Mr. PARSONS. It is a very real problem we have with that country.

Mr. SCHEUER. OK. Will you pass on the message that we're concerned; that we think our State Department ought to lean on both of these countries a lot harder than they're doing?

Mr. PARSONS. I will be delighted to do so.

Mr. SCHEUER. OK. Thank you very much.

Mr. PARSONS. Thank you very much.

Mr. SCHEUER. All right. Now we'll move on to the second panel. All right.

Thomas Schneider, chairman of Rhino Rescue, USA; Robert Schule, trustee of Rhino Rescue, USA; and Kathryn Harrold, trustee of Rhino Rescue, USA.

Well, we're eagerly looking forward to your testimony. If each of you would take about 5 or 6 minutes and speak to us informally, hopefully not reading your testimony, then I'm sure that we'll have some questions for you.

And I might say that your prepared testimony, as prepared—your prepared testimony will be printed in full at this point in the record as you speak. OK?

So let's start off with you, Mr. Schneider.

STATEMENT OF THOMAS SCHNEIDER, CHAIRMAN, RHINO RESCUE, USA

Mr. SCHNEIDER. Thank you very much. We greatly appreciate the attention that you have given to this problem.

Rhino Rescue, USA is an all-volunteer, charitable organization that really originated because individuals who had been to east Africa were outraged to see what was going on in east Africa and, upon informing ourselves, finding out what was going on with the rhinoceros in general.

What we discovered was literally in the last two decades over 80 percent of this species has disappeared and is continuing to disappear at a rate of about 25 percent a year, which means that literally within a generation we could see the extinction of an animal that's been around for 60 million years.

In looking at that simply as concerned citizens, we were outraged and felt that it would be irresponsible of us as guardians of this Earth to allow this to happen. And as a consequence, we organized and have been trying to bring to the public attention and raise money to help fight this issue.

Now this, as you accurately pointed out in the beginning, is really somewhat of a microcosm or a symbol of what is going on all over the Earth with a number of species, and other people will be testifying about that later today.

In fact, there was a major conference that was being held in Washington this week that was cosponsored by the National Academy of Sciences and the Smithsonian that was targeted about the much larger problem, the whole disappearance of the biodiversity. So we really very strongly believe that the rhinoceros is symbolic. There may be other reasons for other species disappearing, but the rhinoceros is symbolic. Given the fact that there are no good reasons, as you accurately pointed out in your introduction, that there are no sound reasons for the development of civilization or anything else for the endangerment of the rhinoceros, it's particularly outrageous that this is going on and that we're allowing it to go on.

In looking at the problem, we have identified basically two major steps that have to occur if the animal is going to be saved, and we have brought in experts to testify today about these different segments.

The first one and the bottom line of what you were talking about with the representative from the State Department is the trade has to be ended. There is no question that the governments of this world must stop the trade. They must pass the laws and enforce the laws that they pass to end the trade. The U.S. Government is in a unique position to apply moral and political pressure on the countries that do trade in the endangered species.

Dr. Esmond Bradley Martin, who is literally the preeminent expert in the world on the rhinoceros and the trade in rhinoceros, will talk in greater detail about this.

The second thing that we have particularly focused on, because the issue really comes down largely to money, is sanctuaries. It probably realistically is going to take some time to shut down the trade simply because, even if the countries immediately banned it, there is a pipeline and we're now down, as you pointed out, we're down to a level of rhinoceros in all the species that is such a low point that we really can't afford to lose more. That secondarily is setting up sanctuaries. These are very large, fenced-in, well-guarded areas. We're talking 15,000, 20,000, 30,000 square acres set up in their natural habitat in which rhinoceros along with other species in the area will be protected and guarded against poaching.

There have been some sanctuaries that have been set up. They have been extremely successful, as was pointed out by the representative of the State Department. One species that is protected by—one of the five rhino species that is protected by sanctuaries, the southern white rhino, the population has actually been increasing. So from that point of view, sanctuaries are something that have to be set up right now. Realistically it takes a lot of money.

From our point of view, there is a great deal that's being done in the world, in the United States by private citizens. Whether you have Dr. Esmond Bradley Martin, who is an American citizen living in Kenya, who has been doing a tremendous job in terms of research and bringing it to the public attention; whether you have people who are donating to organizations like the World Wildlife Fund or people who are volunteers who are helping and donating to organizations like Rhino Rescue, USA, on the private front a tremendous amount is being done.

You and through these hearings have done a great service for us because, as Congressman Henry pointed out, many people are unaware of the problem. Simply by having these hearings and the press coverage that comes with them, they're bringing it to the attention of the public, and through that it should facilitate our raising additional funds.

Obviously we recognize that this is a time of cutbacks in the U.S. Government. If it were possible to raise money through the Government, that would be tremendous because the amount of impact would be phenomenal, but at the same time we recognize that the major effort really has to come through private efforts.

I just really want to thank you because your efforts here in holding these hearings will do a great deal to bring it to the attention of the American public.

Thank you.

[The prepared statement of Mr. Schneider follows:]

BEFORE THE SUBCOMMITTEE ON
NATURAL RESOURCES, AGRICULTURE
RESEARCH, AND ENVIRONMENT OF
THE COMMITTEE ON SCIENCE
AND TECHNOLOGY

UNITED STATES HOUSE OF REPRESENTATIVES

Hearings on the Plight
of the Rhinoceros as an
Example of
the Rapid Loss of the
World's Species.

Statement of

Dr. Thomas J. Schneider

on behalf of

Rhino Rescue USA, Inc.

Mr. Chairman, Members of the Subcommittee and Staff:

My name is Dr. Thomas J. Schneider. I am the Chairman of Rhino Rescue USA, Inc., a charitable, not-for-profit organization headquartered in Washington, D.C., and established to help meet the challenge of preserving the rhinoceros from extinction. Rhino Rescue USA, Inc. is committed to educating the American public about the endangered status of the rhinoceros and to assisting efforts to save the animal, including establishing and maintaining sanctuaries, and anti-poaching and anti-trade measures.

I greatly appreciate the opportunity to address this subcommittee on this pressing problem.

The status of the world's five species of rhinoceros is at best precarious, as will be fully explained in these hearings.

Well over 80% of the earth's rhinoceros have been killed by man in the last two decades. The rhino population continues to fall by nearly 25% per year.

If dramatic steps are not taken immediately the second largest land mammal will probably go extinct in the wild within the period of one generation. To allow this to occur during our watch is unforgiveable and unacceptable.

If man cannot save and secure an animal as grand as the rhinoceros, the world's ecological system is truly endangered, and with it man's very existence. This hearing coincides with a major conference cosponsored by the National Academy of Sciences and the Smithsonian Institution on the rapid destruction of the Earth's natural habitat and the subsequent loss of biodiversity. At that conference the destruction of biodiversity and its consequences were thoroughly documented by many of the world's leading scientists.

The future prospects for this planet's ecological system and diversity of animals and plants are grim. The fate of the rhinoceros is a case in point. The destruction of the rhinoceros is, in a microcosm, what is happening with thousands of other species all over the earth, time and again, for different reasons perhaps, but, nevertheless, still happening. Consequently the rhinoceros is a test case for us to see whether mankind is willing to preserve the ecosystem, and the diversity of life found within it.

Testimony presented today will fully document the decimation of the world's rhino population and the causes of the problem.

Testimony will also explain in detail the different steps that must be taken in order to save and secure the rhino.

As long as a thriving market exists for rhino products, the existence of the animal is threatened. The long-term survival of the animal depends, therefore, on eliminating the market for rhino products. This requires two steps, first getting all of the nations of the world to outlaw the trade in rhino products, and to enforce their laws strictly. Second, the users of rhino products must be educated not to use rhino products, and to use commonly available substitutes. Shutting down the trade in rhino products needs to occur immediately, but realistically, it may take time to reduce demand to a negligible level.

In the meantime, and for the foreseeable future, extensive efforts must be made to preserve the rhinos that exist, and to allow the population to reproduce and return to safe levels. This need to protect the animals from poachers is especially critical because even if the price of rhino horn were to fall by 75% -- it currently can trade at up to $10,000.00 per kilogram or approximately the price of gold -- poverty-stricken Africans would still poach.

Rhino sanctuaries -- large, fenced in, guarded areas -- are the only viable means to protect existing populations. Extensive anti-poaching campaigns are necessary and useful, but there is no equally effective alternative to sanctuaries. Without the protection afforded by sanctuaries, poachers will continue to slaughter rhinos. This is best illustrated by the experience of Zimbabwe where the poaching of rhinos has continued despite the imposition by the government of a shoot to kill policy against poachers. Even with this policy serious poaching continues.

A drawback to sanctuaries is that they are expensive to build and to operate. But we have no choice. The few sanctuaries that have been set up have worked, and have allowed their rhino populations to grow. Many more sanctuaries need to be established.

The country of Kenya is setting forth a model for other countries to follow with a national plan for creating several sanctuaries in addition to the three sanctuaries already in operation on private lands.

Rhino Rescue USA is pleased to enable Mr. Daniel Sindiyo, the Director of Wildlife and Conservation Management for Kenya to testify here today about the extraordinary efforts that Kenya is making in the struggle to save the rhino. The efforts in Kenya are an example of what must occur in many other nations in Africa.

These developing nations cannot do it alone. They desperately need the financial assistance of the developed world. Rhino Rescue USA and other nongovernmental organizations are trying to provide this assistance in a way to ensure that scarce funds are well spent in the battle to save the rhino.

As will become clear through these proceedings, money is a critical component in saving the rhino. Without funds from the developed world, the sanctuaries will not be built, the anti-poaching efforts will not be undertaken, and the anti-market campaigns will not be pursued. Without these monies the public will be left unaware of the precarious state of the rhino and the consequences of its demise.

We are all responsible for the survival of the rhinoceros. The efforts of private citizens have been, and will continue to be critical to saving the rhinoceros. These individual efforts, whether in the form of Dr. Esmond Bradley Martin--who Rhino Rescue USA is most pleased to bring to the United States to testify here this morning--who single-handedly has educated the world about the rhino problem, acted to end the trade of rhino horn, and documented poaching and trading patterns, or the enormous sacrifice of Anna Merz who has expended much of her personal wealth, time and energy over the past several years establishing a rhino sanctuary at Lewa Downs in Kenya, or the thousands of individuals who contribute money to the different wildlife organizations fighting to save the animal, or the volunteers who have donated their time and energy to Rhino Rescue USA, are vital parts in the battle to preserve the rhinoceros.

This struggle, however, also requires action by governments. Governments must act to outlaw and then enforce their laws barring the trade in rhino products. Governments must be responsible for establishing and operating sanctuaries to protect the rhinos. Governments must act to control the poaching of the rhinos.

The United States Government cannot sit by as a passive spectator to the destruction of the rhinoceros and the world's ecological system. The United States Government should bring its moral and political power to bear on those countries that trade in the products of endangered species - in the case of the rhino, most notably the countries of Singapore, North Yemen, Brunei, Burundi and the United Arab Emirates. Only by ending the trade in the rhino will the animal be saved. The United States government is uniquely situated to pressure these countries.

Rhino Rescue USA arose in response to a tragedy of profound implications. Its purpose, to make people aware of a disaster in the making, and to raise money to help stop the decimation of one of the earth's oldest and grandest animals is a battle that we cannot afford to lose. If we cannot save the rhinoceros from extinction we cannot hope to stop the destruction of the earth's habitat and the loss of diversity in life on this plant. We must not continue to allow the destruction of species at a rate unparalleled since the disappearance of the dinosaur. We must act, and act now.

Mr. **Scheuer**. Thank you very much, Mr. Schneider.

Now, Ms. Harrold, television and movie actress——

Ms. **Harrold**. Yes.

Mr. **Scheuer** [continuing]. And concerned public citizen, we honor you on both roles, and we're delighted to have you here.

STATEMENT OF KATHRYN HARROLD, TRUSTEE, RHINO RESCUE, USA

Ms. **Harrold**. Well, thank you, and it is as a concerned citizen that I am here.

I just recently came back from Kenya where I learned about some of this first hand. I visited a rhino sanctuary called Lewa Downs that a woman named Anna Merz, who is a remarkable Swiss woman, runs and has funded. I found out from her some of this information that we've all been talking about.

I had always thought of the rhinoceros as this huge, almost blind creature that kind of charges at anybody at will, this rather mean, menancing creature. I found out that they are not at all like this; that they are, in fact, fairly docile; that they are extremely wary of human beings because we are their major predator. In fact, we are their only predator. They are now using these automatic rifles that the rhinoceros has no chance against.

I didn't know—I was in Kenya for 3 weeks traveling around to all the reserves. The only place that I saw rhinoceros is at Lewa Downs in this sanctuary. You do not see them in the wild any more, and this is a shame because it's horrifying for the rhinoceros but it's also horrifying for us because we should be able to see these magnificent creatures. They are almost prehistoric and they're just wonderful to observe in the wild.

What I want to talk to you about is the sanctuaries because that seems to be the only way that they can survive now. As Tom said, the sanctuary is basically a large area, 15,000 to 20,000 acres usually, and it is completely fenced in with electric fencing and with electronic fencing so that it has sensors. It releases an alarm if somebody tries to get in. Basically it's to keep the animals in and the poachers out. I can appreciate fencing because I grew up on a farm. These are amazing fences, huge and barbed wire and electric.

Mr. **Scheuer**. How high are they?

Ms. **Harrold**. I don't know.

Mr. **Schneider**. They are 7 or 8 feet.

Ms. **Harrold**. About 7 or 8 feet.

Mr. **Schule**. They're about 8 feet, Mr. Chairman.

Ms. **Harrold**. They also need armed guards around the fences at the gates and to watch the rhinoceros, and they also need to maintain the area and take care of the rhinoceros. The veterinarian bills are incredible because they have to travel long distances to get there.

What else do we need to say? Oh, yeah——

Mr. **Scheuer**. Going off the record——

[Off the record.]

Ms. **Harrold**. Basically I'll end up repeating what's already been said. I do just want to stress this information about the sanctuaries. They are extremely expensive because of the fences, because of the personnel. It costs about a half a million dollars to establish one. That does not include buying the land because the land is generally given, and then it costs up to $100,000 a year to just maintain them.

I don't feel that it's up to private citizens to put this money up. Anna Merz, who runs Lewa Downs, put $750,000 of her own money and this is something she's not going to be able to continue to do. If funding is not found, then I think that these sanctuaries will not be able to be maintained. If they're not able to be maintained, then that's the end of the rhinoceros.

I think these animals have been here for 60 million years and I think it would just be horrifying to have them end within my lifetime, which is what would happen. It would be a shame for all of us because we would be losing something truly amazing and remarkable. We would be very sorry.

Thank you, Mr. Chairman.

[The prepared statement of Kathryn Harrold follows:]

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Statement of

Kathryn Harrold

on behalf of
Rhino Rescue USA, Inc.

Mr. Chairman, Members of the Subcommittee and Staff:

My name is Kathryn Harrold. I am a trustee of Rhino Rescue USA, Inc., and have recently returned from a trip to Kenya where I learned first hand about the decimation of the rhinoceros and efforts to save the animal. I am also a movie and television actress.

I am most grateful for the opportunity to appear before this Subcommittee on this matter that means so much to me and is so important for all people in the world.

The high point of my recent trip to Africa was my visit to the 5,000 acre Lewa Downs rhino sanctuary. I spent the morning touring the sanctuary with Anna Merz, a Swiss woman who financed the reserve. We bounced along what Anna optimistically called the road, stopping every twenty minutes or so to get out to look at one of the 13 rhinos who live there. Along the way, I learned about rhinos.

Like most people, I thought of the rhino as an aggressive and menacing animal. I was surprised to learn, and to see, how trusting they are. We visited a sick rhino that had been enclosed and treated for worms. Once the grumpiest animal on the reserve, this enormous male had calmed down and had learned to trust its caretakers in only a couple of weeks. Rhinos are not born mean; they learn to fear, and man has taught them. Rhinos have no predators in the wild, but they are pathetically vulnerable to human killers. What animal stands a chance against an automatic rifle?

I was shocked to learn the extent of the damage caused to the rhino over the last sixteen years. More than 60,000 rhinos have been killed in that short period. The rhino has lived on this earth for over 60 million years, and in just 16 years over 80% of its world population has been lost. It does not take a statistical expert to figure out that in a much shorter time there will be no rhinos at all in the wild, unless something is done, immediately.

What is the reason for this appalling decimation? Man, and human greed. I used to subscribe to the common belief that rhino horn was used as an aphrodisiac. Why, I wondered, had there been such a surge in demand over the last two decades for an aphrodisiac? In fact, the aphrodisiac theory is substantially myth. Thanks to the research of Esmond Bradley Martin, who will address you shortly, we now know that rhino horn is used for two principal purposes. First, it is carved into dagger handles for a thriving market in North Yemen, and secondly it is used for medicinal purposes throughout the Far East. Indeed, nearly every part of the rhino's body from its horn to its toe nails has some healing properties according to Far Eastern medicine.

The demand for rhino horn in North Yemen is largely to blame for the steep increase in rhino poaching during the 1970s. Few people realize that the rhino was another casualty of the oil crisis of the mid 1970s. A carved dagger handle traditionally has been an essential sign of manhood for the North Yemenese, but before the oil boom, the most prized model, carved from rhino horn, was available only to the most wealthy. Workers from North Yemen, who made small fortunes working in the oil fields of Saudi Arabia and the Gulf States, returned home with sufficient cash to buy a coveted rhino horn dagger. The supply of rhino horn had to be increased to meet the new demand. Today a rhino horn is worth more than its weight in gold. Small wonder that poachers all over Central Africa and in Asia slaughter the hapless bearer of this precious commodity.

Efforts have been made to stop the trade in rhino horn, but the ever-rising death rate, now at about 25% per year, provides chilling proof that not enough has been done. Traffic in rhino horn and rhino products is legal in only two countries in Asia: Singapore and Brunei. There the rhino is used for a wide variety of medicinal purposes. These open markets provide the principal incentive for rhino poaching in India, Indonesia, Malaysia and much of Africa. This situation can be and must be remedied, without delay. Yet, even in those countries where traffic in rhino horn has been outlawed, such as North Yemen, illicit trade continues.

Clearly, the rhino will not be safe until the market for rhino products has been eliminated. Esmond Bradley Martin will discuss in detail various measures that have been taken and that still need to be implemented to accomplish this goal.

I will talk with you about the other principal approach to saving the rhino, one which I observed first-hand -- protecting the animal in the wild through the establishment of sanctuaries. A rhino sanctuary is an enclosed, guarded area in which rhinos live in their natural habitat with other animals. The aim of a rhino preserve is to allow the animals to live peacefully and naturally; to mate, reproduce, fight, eat, sleep -- in short, to live out their normal lives as if there were no poachers.

The success of existing sanctuaries show that these reserves work to save the animal from destruction. The rhino population at the Solio ranch sanctuary in Kenya, for example, has quadrupled to over 80 animals. At present there are a handful of privately funded sanctuaries in operation in Kenya. As you will hear from Daniel Sindiyo, the Kenyan government has an ambitious rhino preservation program based on the establishment of sanctuaries. The first of several projected government rhino preserves is due to open at Lake Nakuru National Park early in 1987. Hopefully success will breed success: rhinos from Solio will provide the initial population of the Nakuru sanctuary.

The success of the rhino sanctuaries costs dearly. Before traveling around Kenya, I had no idea of the work and the capital that goes into setting up and running a rhino sanctuary.

The construction cost is conservatively over a half million dollars, and this figure assumes that the land does not have to be purchased. Most of the money goes towards an electric and electronic fence to keep the animals in and the poachers out. The fence is the most costly item, and an essential ingredient in any sanctuary. The second most important expense is personnel. The relatively small reserve at Lewa Downs employs over 35 people, including armed guards who patrol 24 hours a day.

The start up cost is only the beginning. Sanctuaries require about $75,000.00 to $100,000.00 a year in operating expenses. This money pays for the salaries of the personnel, the upkeep of the fence and the property, and, of course, care for the rhinos. There are all sorts of unexpected costs. What happens when a rhino becomes ill? First, the veterinarian must be called: this usually means flying him or her to the sanctuary. The vet than darts the animal to pacify it so that it can be examined. If the animal is seriously ill, it must be placed in a special enclosure, fed a special diet, and receive around the clock medication and care. All this is tremendously costly, but it may save the animal's life, as in the case of the sick rhino nursed back to health this summer at Lewa Downs.

Individuals can not be expected to shoulder the entire financial burden of the sanctuaries. Anna Merz's situation is a case in point. She has spent nearly $750,000.00 of her own money to set up the sanctuary at Lewa Downs. Over two years, several babies have been born, and there has not been a single poaching attempt. The sanctuary is a success, but its future is in danger. Without outside funding, the sanctuary will not be able to continue operating.

Rhino Rescue USA has been created to educate the American public about the plight of the rhino, and to assist efforts to save the animal, including establishing and maintaining sanctuaries, and anti-poaching and anti-trade measures. As long as there are poachers, rhinos need protection to survive. And as long as there is a market there will be poaching. Sanctuaries have been proven to provide a safe and healthy environment in which the animals survive. We must do everything we can to support these worthy efforts.

In Kenya, I learned about a typical day at the sanctuary. The guards locate and identify each of the rhinos every day, early in the morning. They stay with the rhinos all day long so that each rhino is within eyesight at all times.

Even though they never let the rhinos out of their sight, the guards keep a healthy distance from their charges. Although gentle by nature, rhinos are not tame animals by any means. When making the morning rounds at the sanctuary, we kept our distance when we got out of the car to look for animals. Rhinos may not be aggressive, but they are very large. Also, the sanctuaries are full of other game. We might well have run into an orner water buffalo, or a pride of lions. To me, that was part of the beauty of a rhino preserve. It allows rhinos to live undisturbed in their natural habitat, surrounded by other animals, but free from the threat of death by poachers.

As we traveled around to different parts of Kenya, I grew tired of hearing the same refrain from our guide, "There used to be hundreds of rhino here.....You used to always see rhino in this brush." Little did I know when I visited the Lewa Downs sanctuary on my third day in Kenya that those would be the only rhinos I would see during my entire trip. Without sanctuaries, you have a better chance of seeing a rhinoceros in an American zoo than in Kenya.

The sad truth of the last two decades is that rhinos are safe only in sanctuaries. As long as rhino poaching continues, the animal's only chance for survival is to be closely protected and guarded. Sanctuaries provide this essential protection without infringing upon the animals' habits or habitat.

This noble animal, a visible link to the dinosaur, is on the brink of extinction. The rhinoceros has walked the earth for 60 million years. Unless something is done immediately, the rhinoceros will become extinct in the wild during our lifetime. It is within our power to save the rhino, and it will be on our conscience if we don't.

Mr. SCHEUER. Well, we appreciate your testimony very much. I think you're absolutely right, they are prehistoric monsters going back 60 million years. They've survived every known natural threat and predator. It was left to mankind virtually to wipe them off the face of the Earth only in the last generation, and it says some awful things about us if we let that happen.

OK, Jim Cooper of Tennessee.

Mr. COOPER. Thank you, Mr. Chairman. Were we going to hear from Mr. Schule first?

Mr. SCHEUER. Oh, excuse me. Hold up; we haven't had the last witness yet.

Bob Schule is one of those small handful of public servants as a consumer reps, representatives, who stopped the destruction of the Federal Trade Commission in 1979. This Member and this staff director played a role in that and we worked with Bob. I can say that the American people owe Bob a tremendous debt of gratitude for his work in saving the FTC.

Despite the fact that he has entered the hallowed halls of the private sector, he continues to devote his energies, as is obvious today, to matters of deep public concern.

So all I can say is welcome, old friend. Give us your wisdom, and then we'll hear you out. We're about to have a rollcall vote. We'll hear you out, and then if you'd all be willing to wait, we'll adjourn for the vote and come back for questions.

STATEMENT OF ROBERT SCHULE, TRUSTEE, RHINO RESCUE, USA

Mr. SCHULE. Mr. Chairman, thank you very much.

First, let me say that my partner, Nancy Reynolds, is also a trustee of Rhino Rescue and she's very dedicated to this and she wishes she could be here today but she cannot, and she extends her best wishes to Mr. Henry and Congresswoman Schneider and everyone here on the committee. She hopes that she can participate another day.

I don't want to prolong our portion of the hearing beyond the eloquent statements of Kathryn other than to just make a few comments.

I would like to first express my appreciation to the chairman for his kind expressions of our long—in recalling our long association. From the time I was in public service representing the State of New York up until the time that I was a lobbyist for President Carter in the White House, I must say that some of my most satisfying moments were in battles in which we were allied.

The chairman has referred to the FTC battle. It's one in which the House and the Senate had very different positions on the FTC authorization bill, and the FTC actually went out of existence for 3 days. Needless to say from the Carter administration's viewpoint, the Senate bill would have inhibited the FTC's ability to protect the consumer. It was through the chairman's leadership that we were able to conduct a meeting, and I wonder if the chairman recalls the meeting at the White House between the House and Senate conferees where the House bill was ultimately accepted by the conferees, and that was the exact day that the Iranian hostage rescue mission was underway. The fact that the President was able to participate and to successfully conclude that agreement I think is a tremendous tribute to your leadership, Mr. Chairman, and I'd like to publicly thank you.

So it's a particular honor and a pleasure for me to be here before this committee and before the chairman and before my old friend and your staff which has been terrific in this hearing, and particularly my old friend and colleague, George Kopp.

Mr. Chairman, I'm aware of the feelings of many that the wanton destruction of the rhinoceros is a terrible thing but that this hearing represents a frivolous investment of this subcommittee's time during the last 2 or 3 weeks of the Congress. I think that your opening statement and Tom's written statement are eloquent—is an eloquent response to that viewpoint. When you ask, if we can't save the rhinoceros, what can we save, I think you hit it right on the head.

I also believe that it is an analogy for similar situations throughout the world today. I hope as we listen to the testimony of the experts who live with this as part of their professional lives every day that we begin to reflect the magnitude of the problem and we begin to see and form the foundations for possible solutions. And I hope that—and I really want to emphasize to the subcommittee that Rhino Rescue stands ready to play whatever part that you deem appropriate.

When George and Tom and I were discussing and really lamenting the lack of commitment on the part of many to take the problem seriously, we were discussing what collectively saving the rhino meant to us personally—why did we care so much. And it really reminded me of words which Walt Whitman wrote so long ago when he wrote:

> I think I could turn and live with animals. They are so placid and self-contained. I stand and look at them long and long. They do not sweat and whine about their condition. They do not lie awake in the dark and weep for their sins. They do not make me sick discussing their duty to God. Not one is dissatisfied; not one is demented with the mania of owning things; not one kneels to another nor to his kind that lived thousands of years ago; not one is respectable or unhappy over the whole earth.

Mr. Chairman, Rhino Rescue thanks you and the subcommittee for your leadership in this issue, and we really appreciate the opportunity to participate.

Thank you very much.

Mr. SCHEUER. Thank you very much, Bob.

And now we'll take about 15 minutes to get this rollcall vote. After that, we'll have some questions for you.

[Recess taken.]

Ms. Harrold——

Ms. HARROLD. Yes.

Mr. SCHEUER [continuing]. In your testimony you spoke of the success of the Solio game ranch. What do you think are the factors that enabled this ranch to quadruple its rhino herd while the native rhino population in Kenya were being halved, were being decimated—are being decimated even as we speak?

Ms. HARROLD. Well, I think it's the same thing that will make the other sanctuaries successful—an excellent fence system, guards, armed guards, and good funding.

Mr. SCHEUER. Adequate funding?

Ms. HARROLD. Yes, adequate funding.

Mr. SCHEUER. Where should the funding come from—governments or foundations, private individuals?

Ms. HARROLD. I think it should be a combination of things—people, the Government, wherever it can be raised.

Mr. SCHEUER. What specific steps do you think Congress ought to take to assist international conservation efforts to save the rhino? Mr. Schneider, perhaps?

Mr. SCHNEIDER. Thank you.

I think there are a number of fronts that would—that actually have already been raised by different Congressmen on the panel. I think one of the things that would be very helpful would simply be a resolution for some sort of public statement by Congress, and to a certain extent these hearings are a beginning, stating that there is a very serious concern; that this is something that is upsetting the Congress; and that countries should be stopping the trade and something needs to be done to do—to end the trade and poaching of the rhinoceros.

I think a second point that Congressman Henry raised was the issue of attaching amendments to trade legislation, to foreign aid legislation that basically puts restrictions on countries that deal with rhinoceros products and deal with other endangered species.

I think the third area, and this is obviously the most difficult because of the difficulties with the budget deficit, and that is really appropriations. I should note on that that very small amounts of money by the U.S. Government standards can make an enormous difference. Literally an appropriation of $1 million a year for 2 or 3 years could tremendously help efforts to serve the rhinoceros, set up sanctuaries, and could literally save the species.

So I think those are the three areas where you could be of greatest assistance to us.

Mr. SCHEUER. Thank you, Jim.

I wish to recognize the presence of the dean of the minority representation on this committee, Congresswoman Claudine Schneider of Rhode Island.

OK, Jim Cooper of Tennessee?

Mr. COOPER. Thank you, Mr. Chairman.

I've been impressed by the testimony I've heard here today. I'd like to make sure that I understand. This group, Rhino Rescue, USA, is a private, charitable group; right? So that means it survives on the contributions of regular citizens?

Mr. SCHNEIDER. Yes, entirely, and it's also all volunteers. We have no individuals on a payroll. We're doing it in our spare time.

Mr. COOPER. The people who contribute to your group benefit from the tax deduction that's afforded to any charitable contribution?

Mr. SCHNEIDER. Yes. Yes; absolutely.

Mr. COOPER. Where is your group located?

Mr. SCHNEIDER. Our offices are based in Washington, DC, though originally we were incorporated in the fine State of Ohio.

Mr. COOPER. I have a selfish reason for asking because it is one of the few groups that I would I think actually consider contributing to. What is your address? What would be——

Mr. **Schneider**. We are in suite 400, 1300-19th Street, Northwest——

Mr. **Cooper**. Suite 400, 1300-19th Street, Northwest?

Mr. **Schneider**. 20036 here in Washington, DC, and we have a post office box 33064. Our proper name is Rhino Rescue, USA, Inc. Thank you.

Mr. **Cooper**. One thing that's come to my attention is that really the primary reason for the poaching is the value of the horn, the rhino horn. These poachers kill the rhinoceros in order to get that horn, but it could be arranged so that the horn could be separated from the animal without killing the animal. In a sense they are needlessly and wantonly killing the huge animal for one small horn.

Mr. **Schneider**. I think that raises a point that is often asked. You see from the carcass in the photograph on the left what normally happens as they do come in, as you point out, come in and remove the horn and take off with that. The horn is selling up to essentially the price of gold on the market, $10,000 a kilo.

There are two serious problems with that. The experts—and I think Esmond Bradley Martin can talk more about this—are raising serious questions about the viability of the rhinoceros. They do use it for defense purposes. So without the horn, if you did remove it commercially, which is possible to do, they would be defenseless.

There are some indications that have not been scientifically fully documented, but on the basis of observation, when rhinos lose their horns they stop reproducing. So it may play a role in reproduction. Which obviously if they stop reproducing, you lose the species.

And that, finally, it runs down to a very moral and philosophical question: should we basically be feeding a market in an endangered species? It raises questions about birds and sorts of other species, and I think that goes to our whole question: can man not restrain himself or does it mean that man is going to destroy all his environment?

Mr. **Schule**. Congressman, if I might just add—I think Tom has covered it fairly well, but I think there is one other aspect of it. He has pointed out that the amount of money really to do some of the things that you're going to hear about today is small in terms of some of the other things that we consider here in the Congress on a daily basis.

The program that you've just alluded to is extremely expensive. When you talk about anesthesizing an animal the size of a rhino and continue to do the kinds of things that it would require to accomplish that program, when you look at the amount of money that that would take—and the rhino horn does grow back eventually—I think that what you really are going to wind up with is a much more expensive program than if you went ahead on the front end and did some of the things like we talked about with sanctuaries and others. And I know that Esmond wants to—will talk about this later, but there are a lot of other aspects. It's pretty complicated, but the expense I think is one of the major reasons why that wouldn't be very practical.

Mr. **Cooper**. Thank you. That helps me understand how the sanctuary movement would be the only way to go.

Thank you, Mr. Chairman.

Mr. **Scheuer**. Well, not only that, it seems to me that there's a sense of outrage here. It's proper, it's spontaneous, and it's right. Once we start saying, well, you can take the rhino, you can cut off his horn in such a way that you don't kill him, and that's OK, then you sort of leech the whole movement of this sense of righteous outrage. We're degrading our environment. We're degrading ourselves. This kind of extermination of a major, noble beast, the second largest land animal, shouldn't take place on our watch. I don't think we can do without that outrage factor. I think that's what propels people. That's probably what got Ms. Harrold involved in this in the first place and Schneider and Schule, and it's what got this hearing. We're all outraged.

That picture is enough to make your gorge rise [indicating large photograph of dead rhinoceros]. It's revolting. It's a terrible commentary on human greed and on human insensitivity and on human irresponsibility. I don't think we ought to try to mitigate the sense of outrage that propels great people like you to give of yourselves.

Mr. **Schule**. Thank you for that statement, Mr. Chairman. I can tell you that Rhino Rescue, USA, is outraged.

Mr. **Scheuer**. Well, I hope you'll continue.

Claudine Schneider, would you like to give us a bit of outrage?

Ms. **Schneider**. I will be more tempered in my remarks. I left my outrage at the last hearing, and I apologize for being late because I did have another commitment. So I'm sorry that I did not have the opportunity to hear your testimony.

I'll ask Mr. Schneider afterwards if we're related. I don't know, but—[laughter].

But sticking to the official questions, I was interested in the fact that seeing as how North Yemen and Singapore are two of the countries that are probably the largest dealers in this trade, to what degree have you seen the Federal Government play a role in the trade negotiations or any kind of negotiations with these two countries?

Mr. **Schneider**. I think that we are an organization of relative youth. We really got organized last autumn. Other wildlife groups in the United States such as the World Wildlife Fund have been working for a number of years to end the trade in endangered species, and specifically in the rhinoceros. We understand that they and other groups have made representations to the Government, and our understanding is that there has not been a great deal of action taken by the United States Government. The actions that have largely occurred have been through the individual efforts of people like Esmond Bradley Martin who has gone around and personally worked, through the chairman of World Wildlife Fund International, Prince Philip, who has personally lobbied very seriously with these organizations. That's not saying that the United States Government has been blocking efforts. It's really just saying that they have not taken any seriously offensive efforts.

Ms. **Schneider**. Well, it seems North Yemen has a law but they're not enforcing it; is that correct?

Mr. **Schneider**. Yes; and that was really very much the result of the efforts of American wildlife organizations putting direct pressure on them, generating a mail campaign, and directly lobbying rather than the effort of the United States Government intervention.

Ms. **Schneider**. So it seems to me that the Federal Government does have the opportunity to say, "Look, you have a law on the books; you're not enforcing it." And considering that we supply you with a significant amount of foreign assistance, $36.5 million, I think, that perhaps we ought to be able to tie some strings to that contribution and say that our economic support and our military assistance will not be forthcoming unless you enforce this law because it is in our best interest.

Mr. **Schneider**. I think that is exactly right. I think the United States is in a unique moral and political position to end the rhino trade, and I think it is really in our national interest to preserve species worldwide. And for us not to act, given the fact that really what we're talking about is simply applying political pressure, is really inexcusable.

Ms. **Schneider**. I think that all of us have the will to act; it's just knowing what to do, making the right moves. I don't know, I think that this is something that this committee can pursue if we can attach an amendment to a foreign aid authorization to North Yemen or to Singapore and get some action that way. But I would like to recommend that to the committee and let's see what we can do on it.

Mr. **Schneider**. We would be very happy to assist you in any way we possibly could to further that.

Ms. **Schneider**. Good. Thank you very much.

Thank you, Mr. Chairman.

Mr. **Scheuer**. Lindsay Thomas of Georgia.

Mr. **Thomas**. Thank you, Mr. Chairman.

Tom, and if I might call you Tom——

Mr. **Schneider**. Please.

Mr. **Thomas**. Let me just chat with you a minute or two here. In hearing your testimony and all of the members that have testified here this morning and from what I've read about the rhinoceros, it's a very interesting situation because, as I see, here is a very unique animal. He is a prehistoric animal. He is unlike many of the endangered species that we work with whether it is here or an international effort. He's not a highly adaptive animal and there is not a lot of ability for him to change.

We have taken other species—for example, it's amazing to go right down on the Georgia coast, all of which is in my district, and go to a couple of the islands where we have ibex and other animals that have been endangered, antelopes, exotic antelopes that we are raising in the future prospect and hope that one day we can return them to some of their natural environment.

I trust that there are seed herds being established or there are animals that we can go back and establish some refuges that are being maintained, but to me when you talk about a refuge of 15 to 20 thousand acres all under electric fence, it's the thing that I hope we could get away from and one day literally return animals truly back to the wild on the plains in Africa where he belongs.

But I guess what I am saying to you—do you sort of concur with me that this is a classic case in which we literally have to preserve the animal itself and enough environment until we can educate and change our mindset about his future?

Mr. SCHNEIDER. That could not be better stated. It is a case where the animal has no future if we do not end the market and the demand. That realistically is going to take time, and in the meantime we have to preserve it in as close to a natural habitat as possible, which is what the role of the sanctuaries are. And there's really no alternative. If we don't preserve it in these sanctuaries, by the time the market is ended there won't be any rhinos to save.

I think we have some representatives from American zoos here who are talking about trying to breed them in the United States. The efforts in Kenya, for example, which Mr. Daniel Sandiyo is going to be testifying has already started, a program to build these sanctuaries. Realistically it has to be two-pronged. We have to end the market in the long term. In the short term, as you pointed out with the number of animals on the Georgia coast, we have to also preserve them in as close to their natural habitat as possible.

Mr. THOMAS. Tom, there are those—and I don't want you to take my comments wrong here—there are those who might subscribe to the fact that the rhinoceros is literally an animal at the end of an evolutionary alley. Like the condor, it's a question as to whether or not he can survive in the end.

But as I see him, he's an animal that is not a predator, and it makes him a lot easier to work with if we can establish and maintain some of his habitat.

It's very mindful of a problem we ran up here recently, though—when you look at these daggers, these dagger handles we think of as, gosh, here's a trinket, but to the people and the tribesmen of Yemen, if you read a little bit about the cultural background, you find out that the fact is that the dagger is a very important aspect of the culture there in that country.

If you go back to Leon Uris' recent book, "The Haj," he talks of the dagger as an essential—a very important aspect of this person's culture.

We just recently held on our Subcommittee on Fish and Wildlife hearings in which there were certain members of Indian refuges in this country and groups that felt that the American bald eagle should be killed for religious reasons. They deemed that that was their right. In the course of the hearings there, we discovered that most of them did not know that the eagle, of course, is a migratory bird throughout most of his life, particularly in the younger stages. And so the Supreme Court upheld our finding, and they are no longer allowed to kill those eagles for religious purposes on the refuge.

Here was religion, cultural background—it's the same classic conflict we have right here in the case of the rhinoceros. So I know that you've got your work cut out for you. It is a tremendous issue, and along with it you've got this habitat problem that is just as big as the trade and traffic in rhinoceros horns.

There was one other item I wanted to ask you about. Instead of doing the talking, I'll ask you this. In the hope of returning and the preservation, in my opinion, for much of animals—large game in Africa, I think somewhere in there the economic value of the animal is going to determine whether he survives or not. You and I might not like that aspect of it. You and I might agree that certainly he has a right of his own to live and survive, and we don't have a right to go in there and to kill him or poach him, or whatever, or to run him off of the land. But the hard, cold facts are his value in some economic form is going to determine whether or not he survives.

There was a recent National Geographic special where they are finding in certain areas for the first time in curbing native poaching of animals—they are doing it by taking directly the resources from the animal to the sport hunter, that money, and pumping it directly back into the local, native economy in the forms of schools, stores, housing, and the whole works. By seeing that economic value that the animal brings back into the community, in those areas instances of poaching are turning down.

I just bring that out to ask you what your reaction is if one day he is truly—if we truly see the rhinoceros re-established in the large game refuges in Africa, if you see this might possibly be a chance or a thread through which he will survive for all time to come?

Mr. SCHNEIDER. You've raised a number of points and I agree with basically all of them.

In fact, what is going on—and Esmond Bradley Martin and Daniel Sindiyo can talk more specifically about this—but, in fact, for example, in the Lewa Downs sanctuary that was mentioned earlier in the testimony the rhinoceros and other wild animals in the sanctuary coexist with cattle breeding which has direct economic value.

In Kenya the third largest industry is tourism. Much of that tourism is coming to see the wild game. So the country has a very direct economic interest in preserving it.

In Zimbabwe there are an increasing number of ranches that used to be in the production of feed animals that are now producing game, wild game, for tourist purposes, other purposes.

So that in Africa there definitely is a recognition that these animals have an economic value. I think in dealing with the local population, whether in Yemen or whether it is in Japan, that previously the doctors would use the rhinoceros for medicinal purposes. There is a tremendous educational effort that needs to be done. It's not just educating the American public about the endangered state of it; it is in educating the local people. Esmond Bradley Martin can talk about substitutes that are available for many of these products, and it's really sitting down and dealing with the traditional doctors and explaining that there are substitutes for rhino horn; going to the North Yemenese and saying that there are substitutes and urging them to use these other—the alternatives.

There is really a worldwide educational effort that has to go on that makes it more difficult, but it also comes back in the end that there are good economic reasons not to poach. It's hard to argue that the rhinoceros is coming to the end of its evolutionary period, and the reason it's coming to the end are AK-47's. That was something that Darwin really didn't build into the formula, that there were going to be automatic weapons. So it's very difficult to accept the proposition that the animal is evolving out of existence.

But I really think that our biggest problem is we can get the laws and we can enforce them, but we're only going to be able to eliminate the demand if we can educate the local populations and show them—as Kenya has a massive effort trying to do—show them that it is in their best economic interest and their national interest not to kill these species, the rhinoceros but also other endangered species.

I agree. I think you're right on the money in your comments.

Mr. **Thomas**. Thank you, Tom. I've enjoyed visiting with you and other members of the panel here.

Thank you, Mr. Chairman, for allowing me to join you.

Mr. **Scheuer**. Thank you very much for coming, Lindsay. We appreciate it.

Following up on Lindsay's comments, there are desperate economic pressures on Africans who engage in poaching. As the Asians get richer, they provide the market. As the Africans get poorer, the incentive driving them gets ever more powerful. It's tough. It's a very tough situation.

Do we have any places in the United States, large swamp lands—would there be the kind of large swamp lands like the Okichokee Swamps in Florida or the swamps around Biloxi, Mississippi, where I spent a part of World War II that I will remember until my dying day, where we could set up rhino preserves?

Mr. **Schneider**. I think that the issue of translocating to a different continent is something that I would really like to defer to the combination of the zoo people and Esmond Bradley Martin——

Mr. **Scheuer**. OK.

Mr. **Schneider** [continuing]. Who are much better able to deal with it.

Mr. **Scheuer**. OK. Well, we want to thank this panel. You've done an outstanding job in alerting us and alerting the American people and carrying your message to the American people. We congratulate you. We admire you tremendously for your commitment and for your zeal, and we look forward to working with you on this problem in the months and years ahead.

Thank you very much.

Mr. **Schneider**. Thank you.

Mr. **Schule**. Thank you, Mr. Chairman.

Mr. **Scheuer**. We'll now go ahead with panel three: Daniel Sindiyo, director of the Wildlife Conservation and Management Office in Kenya, and Dr. Esmond Bradley Martin, author.

Mr. Sindiyo, we're delighted to have you with us. Why don't you take 5 or 6 minutes to chat with us briefly and after that we'll have some questions. After you and Dr. Martin are both finished, we'll have some questions.

Of course, your prepared testimony will be printed in full at this place in the record. OK?

So just chat with us as if you were sitting with us in our living room.

STATEMENT OF DANIEL SINDIYO, DIRECTOR, WILDLIFE CONSERVATION AND MANAGEMENT, KENYA

Mr. SINDIYO. Mr. Chairman and members of your committee, I am particularly grateful to have this opportunity.

Mr. SCHEUER. Would you pull the microphone a little bit closer, please?

Mr. SINDIYO. All right.

As I was saying, Mr. Chairman, I'm particularly grateful to have this opportunity to discuss a subject which is of great importance to our country.

Mr. Chairman, I'm particularly grateful to the Rhino Rescue Committee, United States, for having sponsored my trip all the way from Kenya so that I could be here today and make a few points.

Mr. Chairman, as you rightly state, my presentation, testimony contains most of the details as regards the Kenyan strategy for the conservation and protection of the black rhino. But since I've been sitting here, Mr. Chairman, I changed my strategy a little bit purely for my own comfort, I believe.

Mr. Chairman, I am aware that you have been to Kenya and that goes for many other people who are here. They've been to Kenya and they are familiar with our Kenyan setup.

Our paper, Mr. Chairman, deals with the events beginning about 1917, and we have outlined the steps that we hope to take in order to secure the population of the rhino in Kenya. We will be coming back to that, but I'd like to go back because ours, Mr. Chairman, is a very short history.

What we are seeing today—and this is not featured permanently in our presentation—is possibly events that have taken place in the last 70 years. If you allow me, Mr. Chairman, I will just go through because I believe this is an important piece of background to indicate what may have influenced the state of the rhino population because one of the questions that I think I might well anticipate is, What have you been doing the whole time and how did you ever get to that position? Mr. Chairman, I'd like to give a bit of background if you will allow me, for 3 minutes on this one.

Our paper, Mr. Chairman, refers to a period of about 1900. Now about 1900, to be specific, about 1906, the Government of those days did actually express concern about the current decline of the population. Of course, we must take into consideration that that particular decline only referred to specific areas and not to the country as a whole.

Mr. Chairman, the period between 1900 and 1925 in the Kenya history of conservation covers a period of sort of opening of the country. This is about the time when we had the overland coming through, the time when you had the World War II [sic], the period when the settlements were being established, and the first 25 years, Mr. Chairman, were characterized by events that took away the attention of areas that were not critical at a particular time, and this includes the field of wildlife.

Wildlife was plentiful. The rhino was to be found practically everywhere from the coastal strip to the Victoria region. Now everywhere else that provided a rhino population had a rhino population.

Now these events and upheavals of those types obviously meant that the rhino, all the wildlife population generally, was not threatened and it was not one of the priorities.

The next 25 years, Mr. Chairman, 1925 to about 1950, went through the same period. We had another war. We had farming. We had the settlements coming in and the period of reconstruction after the war interruptions. We had troops in the area, and in fact it is the record that out of boredom most of the time wildlife in general, and of course the rhino was not an exception, formed or provided very useful moving targets.

So during this period of 50 years the rhino population, as it was the case with all the other wildlife, was obviously still abundant. There was no effort made to try to take a census of animals, generally of what was available and what was going. But there continued to be concern expressed.

I'd like to refer to the rhino trade at that particular time as recorded during the period between 1922 and 1929, or rather 1930. We have records with us which indicate that the auctions, the actual prices of rhino horn during those days were about less than a dollar a kilogram.

Now the rhino horn at that time was being sold in hundredweights, Mr. Chairman. It was possibly so plentiful that they had to sell it in lots of hundredweights, and in one sale you could find about six or seven hundredweights of rhino horns with an average weight of about 2 kilograms each. That can give an idea of how much rhino horn and how the population was going in order to give way for settlements, and so forth.

The period immediately after 1950 was a period of sort of national movement. It was a time when there was a struggle for independence. This, again, changed the priorities all the way into the 1960's. So the period of awareness, Mr. Chairman, that we can really talk about when we started taking stock of what we had starts about 1960. This is how we come to record such figures of populations of about 18 to 20 thousand at the beginning of the 1960's.

Then we come to the 1970's and we are now talking about populations of about 7,000 or 9,000 head of rhino population.

Mr. Chairman, it is at that point that I'd like to start now in trying to indicate how the Kenyan strategy developed.

During the 1975–76 period we had a general reconstruction of the country's economy and government. Now out of that effort came out a new government department responsible for the entire providence of wildlife conservation and management. It is, therefore, from about 1975 that we can start talking about the Kenyan effort.

Now when it became very clear that the rhino population was really going down, the Government took three major steps. It was considered necessary to forgo the foreign exchange that was coming from certain activities like big game hunting, trade in wildlife products, and, finally, we had to spend a little money to establish armed antipoaching units. These were the initial efforts by the Government of Kenya to try and bring the situation under control.

Ultimately that was not very effective. Later in 1984 we took a national census, a kind of survey where we established that the rhino population was now close to 500 in the whole country. It was then, Mr. Chairman, that it was decided that the remaining rhino, while we would be doing the best possible to enhance our law enforcement activities, should be rounded up; we should develop sanctuaries so that at least the available stocks can be given the maximum physical security and must be given maximum management opportunity. This was the Kenyan strategy for the conservation of rhino.

Reference has been made by the previous speakers about the efforts that we are taking, the way we are trying to develop our rhino sanctuaries. I'll just mention this briefly and then I'll probably pause at that point.

We are developing five rhino sanctuaries. We are establishing five service units. The difference is that the sanctuaries will be fenced as described, will be heavily patrolled, will receive intensive management because this is a controlled environment, while the service units will take care of those areas which we know do contain rhino but where sanctuaries are either not desirable or not feasible immediately. All these steps are on hand at the moment.

The objective for having these rhino sanctuaries is that we must at the same time while we are fighting poachers, we must be sure that the stock that we have actually been managing is for the purpose of producing breeding stocks. From that point on, we hope—and this has been approved—we will be able to restock all the national parks and reserves in the country.

I might just add two more points on this one, Mr. Chairman, because I'm sure the details are in the testimony.

Mr. **Scheuer**. We're running very short of time, so if you would sum up, we would appreciate it

Mr. **Sindiyo**. I'll sum up, Mr. Chairman.

Mr. **Scheuer**. Yes.

Mr. **Sindiyo**. We have a total of 45 national parks in the country. This constitutes about 10 percent of the land surface area and about 45,000 square kilometers. The idea of having sanctuaries is so that ultimately and in time to come all these parks and reserves will be restored from the sanctuaries that you are now developing.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Sindiyo follows:]

BEFORE THE SUBCOMMITTEE ON
NATURAL RESOURCES, AGRICULTURE
RESEARCH, AND ENVIRONMENT OF
THE COMMITTEE ON SCIENCE
AND TECHNOLOGY

UNITED STATES HOUSE OF REPRESENTATIVES

Hearings on the Plight
of the Rhinoceros as an
Example of
the Rapid Loss of the
World's Species.

Statement of

Mr. Daniel Sindiyo

on behalf of

The Government of Kenya

Mr. Chairman, Members of the Subcommittee and Staff:

My name is Daniel M. Sindiyo. I am the Director of Wildlife Conservation and Management Department for the Republic of Kenya. I am responsible for all of the rhinoceros conservation efforts in Kenya.

I appreciate the opportunity to appear before this subcommittee on this matter of such great importance to my country. I would also like to thank Rhino Rescue USA, Inc. for funding my travel from Kenya so that I might testify here today.

The decline of the Black Rhino population throughout its range in Central and Eastern African regions became noticeable and attracted attention in the early 1960's. The decline has continued to increase sharply through the 1970's. By this time it had become clear that the rhino was an endangered species. Every authority and/or country had to accept this bitter fact and take whatever remedial and feasible measures possible.

At the beginning of this century the Black Rhino was found in large numbers in nearly every part of Kenya, except the immediate coastal strip and the relatively densely settled area around Lake Victoria. However, from as long ago as 1906 the Government of the day began to express concern over the noticeable decrease in the numbers of Rhino. Over the years the decline of the species continued, and its range continued to shrink as a result of farming and new settlements. Despite this decline in rhino numbers, at the end of the 1960's they were still widely distributed over much of Kenya. In many areas they were even abundant. The Tsavo National Park population was the largest in all Africa - estimated at between 7000 - 9000 animals.

In the early 1970's a dramatic change in rhino numbers occurred. Poaching, stimulated by escalating prices for Rhino horn, rapidly became completely out of hand. In the mid 1970's Kenya responded to this crisis with a number of costly measures. All forms of hunting were banned in 1977, followed by a ban covering the trade in game trophies in 1978. These prohibitions resulted in a significant loss to the economy BUT there are no regrets because we had to pay the price in order to save our wildlife heritage.

The results were encouraging and the newly formed well-trained, and well-equipped Anti-Poaching Unit of over 400 personnel quickly reduced poaching.

However, poaching of rhino continued in isolated and remote areas, having the effect of reducing and disrupting herd structures of the remaining breeding groups. It was therefore clear that further action was necessary in order to come save the Rhino. Accordingly, a decision was made to carry out a country-wide Rhino population survey to establish the distribution of the remaining Rhino, to assess the state of the habitat in those areas, to determine population structure (sex and age), and generally to determine whether or not viable breeding populations remained.

Consequently because of the great importance that Kenya attaches to its wildlife resources, and more so to the Black Rhino which is the Symbol of our National Parks, which in turn are the backbone of our Tourism Industry, it became clear that the Government had to develop and put into operation new and more stringent Rhino Conservation Strategies.

Kenya has a history of a high degree of readiness to make bold and costly decisions when it comes to matters concerning wildlife conservation. This National attitude is reflected in the Statement by His Excellency, The President on the subject of Rhino conservation:

> "THE GOVERNMENT OF KENYA HAS ALWAYS RECOGNIZED THE HEAVY RESPONSIBILITY WITH WHICH IT IS CHARGED TO CONSERVE THE PRICELESS HERITAGE OF ITS WILDLIFE RESOURCES FOR PROSPERITY, NEVERTHELESS, DURING RECENT YEARS, THE DECLINE OF THE RHINO POPULATION HAS BECOME A MATTER OF THE UTMOST CONCERN.
>
> MY GOVERNMENT IS DETERMINED TO REVERSE THIS SITUATION WITH ALL MEANS AT ITS DISPOSAL".

Recognizing that poaching has always been the major cause of the fast decline in the Rhino population, and being committed to live up to His Excellency's declared Government's intention, the suppression of poaching by all means possible was immediately identified as an imperative. This was to be followed by a translocation program through which isolated Rhino would be brought together for safety within sanctuaries.

Pursuant to this Policy decision, in addition to the establishment of the Anti-Poaching Units, the policy and practice of translocating isolated individual rhino to safer areas where viable breeding stocks could be established was accepted as a dependable method of dealing with the situation. Thus the Government decided to establish Special Rhino Sanctuaries, which would from that moment on give the threatened rhino maximum physical security from poachers, and an opportunity to receive uninterrupted intensive management which is necessary if the animal is to be saved.

The decision to establish Special Rhino Sanctuaries coincided, however, with current economic constraints, and the level of funding needed was not forthcoming. However, through normal Government funding, and with financial contributions from Non-Government Organizations, the Department's Capture Unit was able to begin. Unfortunately and because of financial constraints, capture and translocation programs were continuously interrupted. In the meantime, security arrangements were intensified in all areas where rhino were known to exist.

These Policy Decisions regarding the conservation of the Black Rhino, and the activities that followed, amounted to a concerted Government effort which needed its own identity for the allocation of resources. For this reason the Kenya Government strategy for the Protection of the Black Rhino emerged, under the title of the "Kenya Rhino Rescue Project". The Project has definite goals and objectives to be achieved during the next five (5) years, and these are summarized as follows.

Saving the Rhino From Extinction:

It is a National obligation to ensure that no species of wild fauna or flora should disappear from our territorial area. This is not only for economic, and scientific reasons but also for cultural and aesthetic considerations. Every animal or plant species constitutes a genetic resource of possible future value.

Establishment of Viable Rhino Breeding Populations to Re-stock Other Parks and Reserves:

This is to be achieved through the proposed establishment of sanctuaries, in which numbers of animals will grow for subsequent translocation to former rhino habitats.

Enhancement of National Parks and Reserves as Tourist Attractions:

The presence of rhinos will enhance the tourist attractions, and promote local and regional (tourism-based) economic development.

Education and Scientific Purposes:

This model project will awaken the Kenya Public in general to the needs of conservation of fauna and flora as a legitimate national effort, and will generate biological information which will be applied in the management of other threatened species. This is in accordance with the provisions and objectives of the current wildlife policy in Kenya enforced and applied through the Wildlife (Conservation and Management) Act.

Scarcity of resources did not deter us from proceeding with the plans to save the Rhino. As has been our tradition, in times of crisis affecting our wildlife, we once again undertook a costly project in the interest of conservation. The Project was prepared and properly costed for which a budget deficit of 1,600,000 francs (i.e. U.S. $2,000,000 was registered (i.e. 42% of the total Project cost) as funds to be raised from private sources. The other 59% 2,209,500 francs (i.e. U.S.$2,761,875 will be raised from Government sources. The Project was to include the establishment of FOUR RHINO SANCTUARIES and FIVE SURVEILLANCE UNITS in selected National Parks and Reserves. This is a bold and ambitious undertaking but one which Kenya is preferring rather than face the risk of loosing its most important heritage. The Project is being undertaken with a lot of confidence in the ability and readiness of Kenyans and other conservationists elsewhere in other countries to give the Project the support it deserves.

The Spirit and Good intentions in which Kenya is undertaking this Project cannot be expressed in better words than the words of His Excellency The President of the Republic of Kenya, Hon. Daniel T. Arap Moi who on 15th August, 1985:

> "CONSEQUENTLY, MY GOVERNMENT REGARDS THE CONSERVATION OF RHINOS AS OF UTMOST IMPORTANCE, ACCORDINGLY AND IN ORDER TO ENHANCE THE EFFECTIVENESS OF THOSE ENTRUSTED WITH THIS CHALLENGING TASK, I HAVE FOUND IT APPROPRIATE TO DECLARE THE RHINO A SPECIAL ANIMAL WHICH WILL BE AFFORDED MAXIMUM PROTECTION TO THE EXTENT THAT RESOURCES WILL PERMIT.
>
> A GREAT DEAL OF RESOURCES WILL BE NEEDED IN ORDER TO DISCHARGE THESE DUTIES EFFECTIVELY. I THEREFORE INVITE ALL WILDLIFE CONSERVATION-MINDED NATIONS AND ORGANIZATIONS TO JOIN HANDS WITH US IN ENSURING THAT THE RHINO IS ONCE AGAIN ELEVATED TO ITS FORMER STATUS THROUGHOUT THE PLAINS AND FORESTS OF KENYA FOR THE BENEFIT OF ALL MANKIND."

I would like to close with a few words of assurance. Since the inception of this Project, we have received a lot of encouraging support and this makes us feel even more indebted to all those who have come to our support. We are confident that the path we are taking will deliver the Kenya Black Rhino population to the next century and hopefully to the one after. After all the Rhino has been on this earth for about 60 million years without the effort of man to perpetuate its existence. The now dangerously dwindling populations can still pick up again given the goodwill of man. I have personally lived with, and among these graceful creatures for over 25 years now. I have witnessed the abuse and torture they have gone through. It is a sad story of events taking place during our time and without sensible excuse. We in Kenya have decided to reverse the situation but our efforts, and those of other countries, can only succeed if those who have perpetuated the market for Rhino horn products can join hands with those who are committed to love and respect this magnificent Creation of Nature.

Kenya is a young country with very limited resources amid many competing demands. We consider the saving of our Rhino Population an inescapable responsibility both to our future generations and to the world at large. We will play our part, and it is our sincere hope all other Nations will play their appropriate and respective roles so that the Rhino may never disappear from the face of the earth.

KENYA

Ministry of Tourism and Wildlife

KENYA RHINO RESCUE PROJECT

Wildlife Conservation and Management Department

STATE HOUSE
P O BOX 40530
NAIROBI, KENYA

15TH AUGUST, 1985

A MESSAGE BY H.E. THE PRESIDENT OF KENYA HON. DANIEL T. ARAP MOI, C.G.H., M.P.

THE GOVERNMENT OF KENYA HAS ALWAYS RECOGNISED THE HEAVY RESPONSIBILITY WITH WHICH IT IS CHARGED TO CONSERVE THE PRICELESS HERITAGE OF ITS WILDLIFE RESOURCES FOR POSTERITY, NEVERTHELESS, DURING RECENT YEARS, THE DECLINE OF THE RHINO POPULATIONS HAS BECOME A MATTER OF THE UTMOST CONCERN.

MY GOVERNMENT IS DETERMINED TO REVERSE THIS SITUATION WITH ALL MEANS AT ITS DISPOSAL, AND IN THIS CONTEXT, HAS LAUNCHED A SPECIAL "SAVE THE RHINO PROJECT" OVER A PERIOD OF 5 YEARS TO ACHIEVE THE OBJECTIVE OF SAVING THIS MAGNIFICENT ANIMAL, FROM EXTINCTION. ANTI-POACHING OPERATIONS HAVE BEEN STEPPED UP THROUGHOUT THE COUNTRY AND REMNANT POPULATIONS IDENTIFIED. SCATTERED RHINOS ARE BEING CAPTURED AND TRANSLOCATED TO SECURE SANCTUARIES TO BUILD UP VIABLE BREEDING POPULATIONS, AND SPECIAL SURVEILLANCE UNITS HAVE BEEN ESTABLISHED TO MONITOR AND PROTECT OTHER ENDANGERED POPULATIONS.

CONSEQUENTLY, MY GOVERNMENT REGARDS THE CONSERVATION OF RHINOS AS OF UTMOST IMPORTANCE, ACCORDINGLY AND IN ORDER TO ENHANCE THE EFFECTIVENESS OF THOSE ENTRUSTED WITH THIS CHALLENGING TASK, I HAVE FOUND IT APPROPRIATE TO DECLARE THE RHINO A SPECIAL ANIMAL WHICH WILL BE AFFORDED MAXIMUM PROTECTION TO THE EXTENT THAT RESOURCES WILL PERMIT.

A GREAT DEAL OF RESOURCES WILL BE NEEDED IN ORDER TO DISCHARGE THESE DUTIES EFFECTIVELY. I THEREFORE INVITE ALL WILDLIFE CONSERVATION-MINDED NATIONS AND ORGANISATIONS TO JOIN HANDS WITH US IN ENSURING THAT THE RHINO IS ONCE AGAIN ELEVATED TO ITS FORMER STATUS THROUGHOUT THE PLAINS AND FORESTS OF KENYA FOR THE BENEFIT OF ALL MANKIND.

(DANIEL T. ARAP MOI)
PRESIDENT OF THE REPUBLIC OF KENYA

From the Desk of
HON. A. J. OMANGA, E.G.H., M.P.
Minister for Tourism and Wildlife

20th August, 1985

MESSAGE BY HON. A.J. OMANGA E.G.H., M.P.
MINISTER FOR TOURISM AND WILDLIFE

The Government of Kenya is deeply committed to conservation of its wildlife resources as part of our valuable heritage. We are also convinced that conserted efforts in conservation of wildlife will continue to offer a broad base for the growth of our tourism industry and therefore make a positive contribution to the growth of our economy. The Kenya of well managed game parks and safaris is legendary and is the foundation of the Kenya Tourism and travel product.

We thank all the organisations and agencies, the world over, who have shown and continue to show interest in conservation of wildlife in our country. In particular we appreciate the efforts of all those that are involved in active participation in the process of conservation by their financial and other contributions. We look forward to such combined efforts in the "Rhino Rescue Project". The Ministry of Tourism and Wildlife will seek the support and collaboration of other Kenya Government Ministries and agencies for the successful implementation of the Project.

A.J. OMANGA
MINISTER FOR TOURISM AND WILDLIFE

ACKNOWLEDGEMENTS

The Department decided on this Rhino Rescue Project following a country-wide Rhino Population and Distribution Survey undertaken by all field stations in 1982/83. Since then, a few senior officers have been assigned various duties in connection with the Project's formulation and the final production of this Project Document.

All Departmental officers serving on the Project's Steering Committee have been deeply involved and they have done extremely well in their respective sections (APPENDIX I).

I am satisfied that all Sections' Heads and all field stations are doing their best to protect the Rhino, and that they are committed to the success of this Project for the ultimate realisation of its objectives.

Some N.G.O.s have worked very closely with us and have offered material support needed at various stages of the Project's formulation

D.M. SINDIYO
DIRECTOR, WILDLIFE CONSERVATION AND
MANAGEMENT DEPARTMENT KENYA
P.O. BOX 40241 NAIROBI KENYA .

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EXECUTIVE SUMMARY

The Kenya Rhino Rescue Project is a step further from what was initiated by the Wildlife Conservation and Management Department in July 1984 as the "National Save the Rhino Project" in an effort to give the Rhino special protection and management. The objective is to save the Black Rhino (*Diceros bicornis*) within the Kenyan territorial boundary from extinction in the face of a continuing decline of its numbers from between 18,000 and 20,000 animals in 1970, to fewer than 500 by the end of 1984. The project identifies the management options (and priorities) which need to be undertaken in order to restore the rhino population to the levels which will ensure its continued survival in Kenya. The project identifies the goal of, and justification for, setting-up *Rhino Sanctuaries* in the country, to be established over a period of four years; from 1985 to 1988. A separate and detailed development and management plan has been completed for a Nakuru Rhino Sanctuary. Similar plans will be developed for Nairobi National Park, Aberdares National Park and Meru National Park during the next four years.

The total estimated expenditure is:

Sanctuaries		**K£**
Nakuru Sanctuary	—	420,000
Nairobi Sanctuary	—	226,800
Aberdare Sanctuary	—	330,000
Meru Sanctuary	—	234,000
(Surveillance Units)		
Aberdare N.P.	—	77,070
Nairobi N.P.	—	29,090
Tsavo National Parks (Both)	—	149,340
BRITISH TECHNICAL AID OFFICERS Vehicles operating costs x 3	—	36,000
RESEARCH	—	47,000
VETERINARY	—	50,700
TOTAL BUDGET		1,600,000

Following translocation to the sites, Rhino Sanctuaries will provide security and breeding opportunities for animals now widely separated. Sanctuaries will be completely fenced with electric wiring, will have water supplies, and will be monitored by management staff. Intensive surveillance will be provided for those areas not identified to receive translocated rhinos.

INTRODUCTION

The decline of the Black Rhino population throughout its range in Central and Eastern African regions became noticeable and attracted attention in the early 1960's. The decline has continued to increase sharply through the 1970's. By this time it had become clear that the rhino was an endangered species. Every authority and/or country had to accept this bitter fact and take whatever remedial and feasible measures possible.

At the beginning of this century the Black Rhino occurred in large numbers in nearly every part of Kenya, except the immediate coastal strip and the relatively densely settled area around Lake Victoria. However, from as long ago as 1906 the Government of the day began to express concern over the noticeable decrease in the numbers of Rhino Over the years the decline of the species continued, and its range continued to shrink as a result of farming and new settlement. In spite of this decline, in rhino numbers, at the end of of the 1960's they were still widely distributed over much of Kenya. In many areas they were even abundant. The Tsavo National Park population was the largest in all Africa — estimated at between 7000 - 9000.

In the early 1970's a dramatic change in rhino numbers occurred. Poaching, stimulated by escalating prices for Rhino horn, rapidly became completely out of hand. In the mid 1970's Kenya responded to this crisis with a number of positive and costly measures. All forms of hunting were banned in 1977, followed by a ban covering the dealing in game trophies in 1978.

The results were encouraging and the newly formed well-trained, and well-equipped Anti-Poaching Unit of over 400 personnel quickly arrested the situation.

However, poaching of rhino continued in isolated and remote areas, thus reducing/disrupting breeding stocks. A survey was carried out to establish the distribution of the remaining Rhinos, to assess the state of the habitat in those areas, to determine population structure (sex and age), and generally to assess whether or not viable breeding populations remained.

The results of that survey were not encouraging. It revealed that population estimates earlier made by various sources had been over-estimated. This meant the status of remaining populations was more critical than previously thought. The most recent estimate of the total population is less than 500 Rhinos for the whole country!

As a further measure taken by the Government, the policy and practice of translocating isolated individuals to safer areas, where viable breeding stocks could be established, was accepted as a dependable method of dealing with the situation. This decision coincided, however with current economic constraints, and the level of funding needed was not forthcoming. Through normal Government funding and with some financial contributions from Non-Government Organisations, the Department's Capture Unit was able to make a start, but because of the financial constraints, capture and translocation programmes were continuously interrupted. In the meantime, security arrangements were intensified in all areas where rhinos were known to exist. The Department has captured, and successfully translocated to safer areas, 90 Black Rhino. The Department has not lost sight of the likelihood of in-breeding in developing enclosed sanctuaries. This potential problem will be addressed through management practices to be adapted for all proposed Rhino Sanctuaries.

The Department is convinced the development of fully protected and secure sanctuaries for the Black Rhino will provide a solution to Kenya's poaching problem. However additional management throughout the rhino's range is also required.

To make the best use of limited resources, the Department decided to man the Rhino Rescue Project with skilled and experienced officers of the Department. In recognition and appreciation of both the moral and material support often given to the Department by private individuals and by Non-Governmental Organisations, the Department also invited representatives of selected Non-Governmental Organisations to serve on the Project Steering Committee (Ex-officio). This Committee, under the Chairmanship of the Director, Wildlife Conservation and Management Department, shall be responsible for the formulation and coordination of management programmes, and the raising and management of all funds donated for the Project, through and in co-ordination with the established Government body — "The Wildlife Fund Trustees." (Appendix 1).

After examining all known rhino management methods, the Department decided to apply the development of Special Rhino Sanctuaries, and the setting up of special Surveillance Units, to give security coverage to individual Rhino or groups pending translocation to safer areas as the two foci of this Project.

OBJECTIVES

The Rhino Rescue Project's goals and objectives are:

Saving the Rhino From Extinction:

It is a National obligation to ensure that no species of wild fauna or flora should disappear from our territorial area. This is not only for economic, and scientific reasons but also for cultural and aesthetic considerations. Every animal or plant species constitutes a genetic resource of possible future value.

Establishment of Viable Rhino Breeding Populations to Re-stock Other Parks and Reserves:

This is to be achieved through the proposed establishment of sanctuaries, in which numbers will build up for subsequent translocation to former rhino habitats.

Enhancement of National Parks and Reserves as Tourist Attractions:

The presence of rhinos will enhance both the tourist attractions and the promotion of local and regional (tourism-based) economic development.

Education and Scientific Purposes:

This model project will awaken the Kenya Public in general to the needs of conservation of fauna and flora as a legitimate national effort and will generate biological information which will be applied in the management of other threatened species. This is in accordance with the provision and objectives of the current wildlife policy in Kenya enforced and applied through the Wildlife (Conservation and Management) Act.

MANAGEMENT CONSIDERATIONS

The success of the Kenya Rhino Rescue Project will ultimately depend on the management of the rhinos confined within the special sanctuaries and later of those released elsewhere. Among the principal management requirements and considerations will be the following.

Origin of stocks

Before any rhino sanctuary is established, it must first be determined from where the initial stocks are to come. This requires a reassessment of the national rhino population, taking into consideration the numbers, distribution, viability, and security of the scattered individuals and groups remaining inside and outside national parks and reserves, including those on private land. Maintenance of the genetic identity of subspecies and the need to avoid inbreeding depression will also be taken into consideration in deciding which rhino should be translocated and to which sanctuary.

Security and staff

As poaching has been the major cause of the rhino's decline in Kenya, hence the current conservation crisis, the most important single management requirement will be good security provided and maintained by honest, efficient, disciplined personnel, with sufficiently equipped vehicles, radios, firearms, and other necessary equipment they may require. Without proper security, all other management considerations will be of no consequence.

Each sanctuary will therefore have its own specially selected staff for anti-poaching patrolling, rhino surveillance, and the maintenance of electric fencing, water supplies, and other management requirements. Where special sanctuaries are situated on private land, protective legislation will be introduced to guard against threats such as possible future changes of land use.

Electric fencing

Rhino sanctuaries will need to be properly fenced with effective and well maintained solar-powered electric fencing in order to prevent rhino from leaving and to help ensure their security. In addition, electric fencing will exclude animals such as elephants whose presence in small sanctuaries is not wanted because of their potential for drastically modifying bushland habitats.

Translocation

Translocation will be used to stock newly established sanctuaries only after they have been surrounded by adequate electric fencing. However, it will continue to be used from time to time as a management measure to move rhinos elsewhere to counter inbreeding or overstocking, depending upon the circumstances. The need for the Capture Unit and the Operations and Veterinary Sections will not therefore end with completion of the initial translocation operations.

Population densities and monitoring

In the initial stocking of rhino sanctuaries the temptation to overstock will be strongly resisted. Where artificially high densities are created, stresses within the population are likely to result in lowered reproduction and heightened aggression, leading to fighting and possible deaths. The initial stocking will be kept low in order to reduce the calving interval and maximise reproduction. Birth intervals will be recorded and when these increase greatly, surplus animals will be moved to new areas.

To avoid overstocking it will be necessary to monitor not only numbers and population densities but also the distribution and age and sex structure of each population and the physical condition, behaviour, and social interactions of the component individual animals. Photographic card identity and record systems and stud books will be set up and maintained in all sanctuaries to provide a scientific basis for management measures to avoid the dangers of overstocking and inbreeding.

Inbreeding

The need to avoid inbreeding depression, resulting in lower birth rates and a higher death rate and a loss of genetic diversity, will be a major management consideration for all rhino management areas but particularly those that are small, enclosed, or both. As small sanctuaries will not be able to contain viable populations of sufficient genetically effective size to avoid rapid losses in genetic diversity (resulting in decreased adaptability to changing conditions), there will have to be intensive interactive management of these small and isolated populations by artificially exchanging genetic material between them.

Habitat monitoring and management

Quantitative vegetation studies will be undertaken to monitor browse utilisation and possible vegetation changes in rhino sanctuaries and to detect signs of overstocking *before* any crisis arises that may result in a 'population crash' caused by malnutrition and starvation. So far as habitat is concerned, it will be necessary to ensure that rhinoceros densities do not exceed the carrying capacity of the habitat in poor years rather than good years, and allowance will have to be made for droughts.

Habitat monitoring will not only enable the Management Section to determine what is happening but will also enable it to decide on management measures to encourage or discourage particular vegetation changes, depending upon the circumstances.

Fire policies

A major consideration of habitat management will be the effects of fire on rhinoceros food supplies. A fire policy will therefore be devised for each management area (whether it involves controlled burning programmes or the total exclusion of fire) and the maintenance of firebreaks, for example, will be mandatory.

Interactions with other species

Interactions between Black Rhino and other species can take various forms, both direct and indirect. Other browsers are likely to compete with Black Rhino for food supplies to varying degrees, but grazers (including the White Rhino Ceratotherium Simum) can also affect Black Rhino habitats through their effects on grass cover in turn influencing the growth of certain Black Rhino foodplants and the risk of fire. Ecological interactions such as these that would not normally be of much concern to free-ranging Black Rhino living in 'the wild' can acquire greater significance within the confines of special sanctuaries, where management action to control the numbers of other herbivores may in certain circumstances become necessary.

Decisions on whether or not to keep Black Rhino and White Rhino together in the same sanctuaries, and if so where, will also be management considerations. The purpose of the present Project is to rescue the former, rather than the latter. There are already indications that conflict between the two species can cause problems in small sanctuary situations.

The desirability of excluding or, where applicable, controlling the numbers of predators, such as lions and hyaenas, that can present a threat to the survival of rhino calves, will also need to be taken into account.

Water

Adequate and well distributed supplies of permanent water will be required in every sanctuary. Where water is not available as required it will have to be supplied, as is being done now in Lake Nakuru National Park.

Research

It will be the responsibility of the Management Section to direct and coordinate all management-related research in rhino management areas. The principal research topics have been outlined above. As the Wildlife Conservation and Management Department will not, at least initially, be able to conduct all the required research itself, appropriate assistance from qualified external researchers will be welcome. A research programme for Nakuru Rhino Sanctuary, involving the participation of Government and non-Government personnel, is already being organised to provide intensive rhino population monitoring before translocation and after release, qualitative and quantitative vegetation studies, and further investigation of the mineral deficiency problem known to occur in the Lake Nakuru area.

Veterinary requirements

The services of a competent and experienced wildlife veterinarian will be available not only during all capture operations and translocations but also to treat injuries such as horn or snare wounds, to investigate suspected diseases, to supervise the remedying of possible mineral deficiencies, and to carry out post-mortems on any rhino that die.

A skilled and experienced veterinarian working with the Veterinary Department under the auspices of German Aid heads the Veterinary Section of the Rhino Project in an honorary capacity. However financial provision is required to meet the costs of immobilising drugs and equipment, the treatment of sick and injured animals, and the conduction of post-mortems, as well as the Veterinarian travel expenses.

British Technical Aid

Three long serving and experienced former Game Wardens are now seconded to the Wildlife Department, as Technical Co-operation Officers, under the auspices of the British Technical Aid Scheme.

In addition, three landrovers have been donated to the Project. The budget includes a component to fund the operating costs of each of these vehicles @£4000 per annum × 3 years which totals £36,000.

Recurrent funding

The increased development necessary for the creation of special rhino sanctuaries will require adequate allocations of recurrent funds for routine maintenance and operating costs.

Conclusion

The essence of Special Rhino Sanctuaries is to establish and manage nucleus breeding populations, which can — with successful breeding — provide enough animals to reintroduce into other areas.

The decision of the Wildlife Conservation and Management Department to establish Special Rhino Sanctuaries is ambitious and far-sighted, and could be the most important single project yet undertaken in Africa to save the Black Rhino. It will need not only considerable capital investment but will require a new form of skilled management. The last chance to save this animal from extinction, may depend upon the full implementation of these management considerations.

PRIORITY RATING AND WORK PROGRAMME:

Over the last 2 years a number of surveys have been carried out by the Planning Section of the Wildlife Conservation and Management Department to examine the feasibility of creating Special Rhino Sanctuaries in various National Parks, Reserves, and other areas.

The areas covered in detail include:-

- Nakuru National Park
- Meru National Park
- Nairobi National Park
- Tsavo National Parks
- Amboseli National Park
- Hell's Gate National Park
- Masai Mara National Park
- Bogoria National Reserve
- Luonyek L.M.D. Holding Ground.

The criteria taken into account for consideration as sanctuaries are:-

- The National status of the area for the long term future
- Suitability of habitat
- Security
- Accessibility — Feasibility for electrified ring fencing
- Permanent water.

Priority areas established for this Project are:

Nakuru National Park	— The entire Park to be upgraded to Special Rhino Sanctuary status.
Nairobi National Park	— The entire area be upgraded to Special Rhino Sanctuary status and surveillance intensified. No additional Rhino translocation required.
Aberdares National Park	— The Salient area to be ring fenced and surveillance intensified.
Meru National Park	— An area of approximately 40 sq. kms. to be ring fenced adjacent to the western boundary of the Park.
Tsavo National Park	— To be considered for a Sanctuary area at a later date when populations can be translocated from built up populations in the smaller Sanctuaries. Surveillance Team to be established now.

Masai Mara National Park — Re-organise and improve Surveillance Team.

Ngeng Valley — Intensify surveillance.

Work Programme:

The order of activities in the Development of Special Rhino Sanctuaries is:

Fencing:

Clearing and preparation of boundaries, construction and electrification of fence with monitoring systems, construction of fence maintenance camps at approximately every 7.5 km. intervals.

Water:

Development of permanent water supplies in the form of boreholes where necessary, windmills, artificial waterholes and dams.

Security:

Construction of sub-Headquarters and patrol outposts where necessary. Improvement of security radio system.

Holding Pens:

Construction of holding pens where necessary to a uniform design.

Patrol Tracks:

Construction of patrol tracks where necessary for routine patrolling surveillance and monitoring.

Vegetation Surveys:

Vegetation surveys will be carried out for each Sanctuary on implementation with an ongoing monitoring of vegetation trends for feasibility studies to improve rhino browse.

Staff:

Deployment of appropriate staff for management of each area. Implementation of appropriate management considerations in section 4 prior to translocation.

Translocation:

Translocation of Rhino will be effected as necessary — programmed by the Rhino Management Section.

Research:

A research unit set up to monitor Rhino behaviour prior to and after translocation to determine density patterns, feeding preferences for each area and carry out general ecological surveys of each Sanctuary in detail.

A detailed development and management plan/work programme will be drawn up for each area on the lines of the Nakuru Rhino Sanctuary Development and Management Plan prior to implementation. Each area will have different requirements and will require its own infrastructure in the form of personnel, transport, equipment and recurrent funding allocations.

BUDGET ANALYSIS This is itemised as follows, and, summarised in Appendix II

NAKURU SANCTUARY — DEVELOPMENT FUNDS:

		K.£
(a)	Fencing	155,000
(b)	Water	50,000
(c)	Security	50,000
(d)	Holding Pens	5,000
(e)	Patrol Tracks	4,000
(f)	Vegetation Survey	1,000
(g)	Staff	—
(h)	Translocation	55,000
(i)	Research	—
(j)	Bridges	10,000
(k)	Radios	20,000
		350,000
	20% Contingencies	70,000
	TOTAL:	420,000

NAIROBI SANCTUARY — DEVELOPMENTS FUNDS:

(a)	Fencing	138,000
(b)	Water	20,000
(c)	Security/Radios	30,000
(d)	Holding Pens	—
(e)	Patrol Tracks	—
(f)	Vegetation Survey	1,000
(g)	Staff	—
(h)	Translocation	—
(i)	Research	—
(j)	Bridges	—
		189,000
	20% Contingencies	37,800
	TOTAL	226,800

ABERDARES SANCTUARY SALIENT — DEVELOPMENT FUNDS:

		K.£
(a)	Fencing	190,000
(b)	Water	—
(c)	Security/Radios	40,000
(d)	Holding Pens	—
(e)	Patrol Tracks	3,000
(f)	Vegetation Survey	2,000
(g)	Staff	—
(h)	Translocation	40,000
(i)	Research	—
(j)	Bridges	—
		275,000
	20% Contingencies	55,000
	TOTAL	330,000

MERU SANCTUARY — DEVELOPMENT:

(a) Fencing	120,000
(b) Water	—
(c) Security/Radios	40,000
(d) Holding Pens	3,000
(e) Patrol Tracks	1,000
(f) Vegetation Survey	1,000
(g) Staff	—
(h) Translocation	30,000
(i) Research	—
(j) Bridges	—
	195,000
20% Contingecies	39,000
TOTAL	234,000

SPECIAL RHINO SURVEILLANCE UNITS: SUMMARISED IN APPENDIX II

ABERDARE NATIONAL PARK	DEVELOPMENT K.£	RE-CURRENT K.£
(a) 2 Land-Rover @£10.560	21,120	—
(b) Radio Equipment	10,450	—
(c) Rangers Accommodation	6,000	—
(d) 20% Contingencies	7,500	—
	45,070	
(e) Vehicle Running and Maintenance @£4000 p.a × 4 Yrs		32,000
NAIROBI NATIONAL PARK		
(a) 1 Land-Rover	10,560	
(b) Radio Equipment	3,680	
(c) 20% Contingents	2,850	
	17,090	
(d) Vehicle Running and Maintenance @3000 p.a. × 4 Yrs.		12,000
BOTH TSAVO NATIONAL PARKS		
(a) 4 Land-Rovers @£10.560	42,240	
(b) Radio equipment	20,900	
(c) Rangers Tentage and Accommodation	8,000	
(d) 20% Contingents	14,200	
	85,340	
(e) *Vehicle Running and Maintenance @16,000 p.a. × 4 Yrs.*		64,000

	DEVELOPMENT K.£	RE-CURRENT K.£
BRITISH TECHNICAL AID		
Operating costs for 3 donated vehicles × 3 Yrs. @£12,000 p.a.		36,000
RESEARCH		
(a) IBM Computer system	7,000	
(b) External rhino translocation study		40,000
VETERINARY SERVICES		
Capture, treatment and after care of rhinos, plus transport expenses for Honorary Veterinarian services		50,700
TOTALS	1,365,300	234,700
SUMMARY		
(a) Nakuru Sanctuary	420,000	
(b) Nairobi Sanctuary	226,800	
(c) Aberdare Sanctuary	330,000	
(d) Meru Sanctuary	234,000	
	1,210,800	
RHINO SURVEILLANCE UNITS		
(a) Aberdare National Park	45,000	32,000
(b) Nairobi National Park	17,090	12,000
(c) Both Tsavo National Parks	85,340	64,000
	147,500	108,000
BRITISH TECHNICAL AID OFFICERS Vehicle operating costs		36,000
RESEARCH	7,000	40,000
VETERINARY		50,700
TOTALS	1,365,300	234,700

TOTAL BUDGET
K.£ 1.6 Million

IMPLEMENTATION SCHEDULE:

This Section ties together the various Development and Management requirements for Special Rhino areas over a 4 years' period from 1985 - 1988.

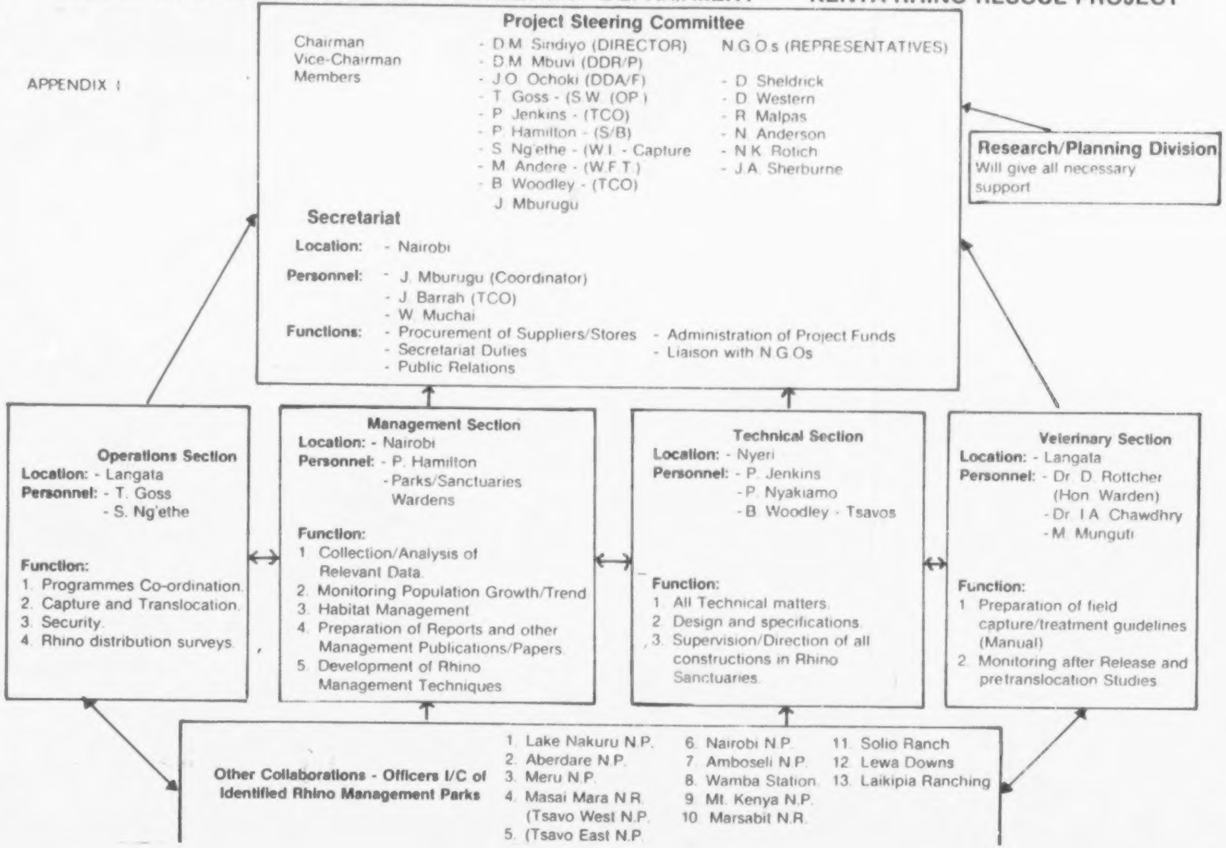
		1985	1986	1987	1988
(a) Nakuru Park	- (Rhino Sanctuary)	X	X		
(b) Nairobi Park	- (Rhino Sanctuary)	X	X	X	
(c) Aberdare Park	- (Rhino Sanctuary)		X	X	
(d) Meru Park	- (Rhino Sanctuary)			X	X
(e) Masai Mara	- (Surveillance Unit)	X	X	X	X
(f) Ngeng Valley	- (Surveillance Unit)	X	X	X	X
(g) Tsavo Parks (Both)	- (Surveillance Unit)	X	X	X	X
(h) Aberdare Park	- (Surveillance Unit)	X	X	X	X
(i) Nairobi Park	- (Surveillance Unit)	X	X	X	X

APPENDICES

APPENDIX I — Project Steerring Committee
APPENDIX II — Itemised Budget Analysis
APPENDIX III — Maps of Rhino Sanctuaries
— Nakuru National Park
— Aberdare National Park
— Aberdare National Park Salient
— Nairobi National Park
— Meru National Park
APPENDIX IV — Design of Standardised Rhino/ Sanctuary Fence.

APPENDIX I

WILDLIFE CONSERVATION AND MANAGEMENT DEPARTMENT KENYA RHINO RESCUE PROJECT



Project Steering Committee

Chairman - D.M. Sindiyo (DIRECTOR)
Vice-Chairman - D.M. Mbuvi (DDR/P)
Members
- J.O. Ochoki (DDA/F)
- T. Goss - (S.W. (OP.)
- P. Jenkins - (TCO)
- P. Hamilton - (S/B)
- S. Ng'ethe - (W.I. - Capture
- M. Andere - (W.F.T.)
- B. Woodley - (TCO)
- J. Mburugu

N.G.O.s (REPRESENTATIVES)
- D. Sheldrick
- D. Western
- R. Malpas
- N. Anderson
- N.K. Rotich
- J.A. Sherburne

Secretariat

Location: - Nairobi

Personnel:
- J. Mburugu (Coordinator)
- J. Barrah (TCO)
- W. Muchai

Functions:
- Procurement of Suppliers/Stores
- Secretariat Duties
- Public Relations
- Administration of Project Funds
- Liaison with N.G.Os

Research/Planning Division
Will give all necessary support

Operations Section
Location: - Langata
Personnel: - T. Goss
- S. Ng'ethe

Function:
1. Programmes Co-ordination.
2. Capture and Translocation.
3. Security.
4. Rhino distribution surveys.

Management Section
Location: - Nairobi
Personnel: - P. Hamilton
- Parks/Sanctuaries Wardens

Function:
1. Collection/Analysis of Relevant Data.
2. Monitoring Population Growth/Trend
3. Habitat Management
4. Preparation of Reports and other Management Publications/Papers.
5. Development of Rhino Management Techniques

Technical Section
Location: - Nyeri
Personnel: - P. Jenkins
- P. Nyakiamo
- B. Woodley - Tsavos

Function:
1. All Technical matters.
2. Design and specifications.
3. Supervision/Direction of all constructions in Rhino Sanctuaries.

Veterinary Section
Location: - Langata
Personnel: - Dr. D. Rottcher (Hon. Warden)
- Dr. I.A. Chawdhry
- M. Munguti

Function:
1. Preparation of field capture/treatment guidelines (Manual)
2. Monitoring after Release and pretranslocation Studies.

Other Collaborations - Officers I/C of Identified Rhino Management Parks

1. Lake Nakuru N.P.
2. Aberdare N.P.
3. Meru N.P.
4. Masai Mara N.R. (Tsavo West N.P.
5. (Tsavo East N.P.
6. Nairobi N.P.
7. Amboseli N.P.
8. Wamba Station.
9. Mt. Kenya N.P.
10. Marsabit N.R.
11. Solio Ranch
12. Lewa Downs
13. Laikipia Ranching

ITEMISED SANCTUARIES BUDGET ANALYSIS

APPENDIX II

Item	SANCTUARIES				SURVEILLANCE UNITS			
	Lake Nakuru Sanctuary	Nairobi N.P. Sanctuary	Aberdares Sanctuary	Meru Sanctuary	Aberdare N. Park	Nairobi N. Park N.R.	Tsavos (Both) Parks	Totals
	K£	K£	K£	K£	K£	K£	K£	K£
Fencing	155,000	138,000	190,000	120,000	-	—	—	603,000
Water	50,000	20,000	—	—	—	—	—	70,000
Security (buildings)	50,000	—	—	—	—	—	—	50,000
Holding Pens	5,000	—	—	3,000	—	—	—	8,000
Roads/Bridges	14,000	—	3,000	1,000	—	—	—	18,000
Studies	1,000	1,000	2,000	1,000	—	—	—	5,000
Translocation	55,000	—	40,000	30,000	—	—	—	125,000
Radios	20,000	30,000	40,000	40,000	10,450	3,680	20,900	165,030
Others (Tool, Tents, spares, etc)	70,000	37,800	55,000	39,000	—	—	—	201,800
	420,000	226,800	330,000	234,000				
Vehicles					(2) LR 21,120	(1)LR 10,560	(4) LR 42,240	73,920
Accommodation (Rangers)					6,000		8,000	14,000
Equipment					7,500	2,850	14,200	24,550
(Vehicles Operation Cost) (4 Years)					32,000	12,000	64,000	108,000
					77,070	29,090	149,340	
British Technical Aid Officers (Vehicle operating Cost x 3)								36,000
Research								47,000
Veterinary								50,700

TOTAL BUDGET 1,600,000

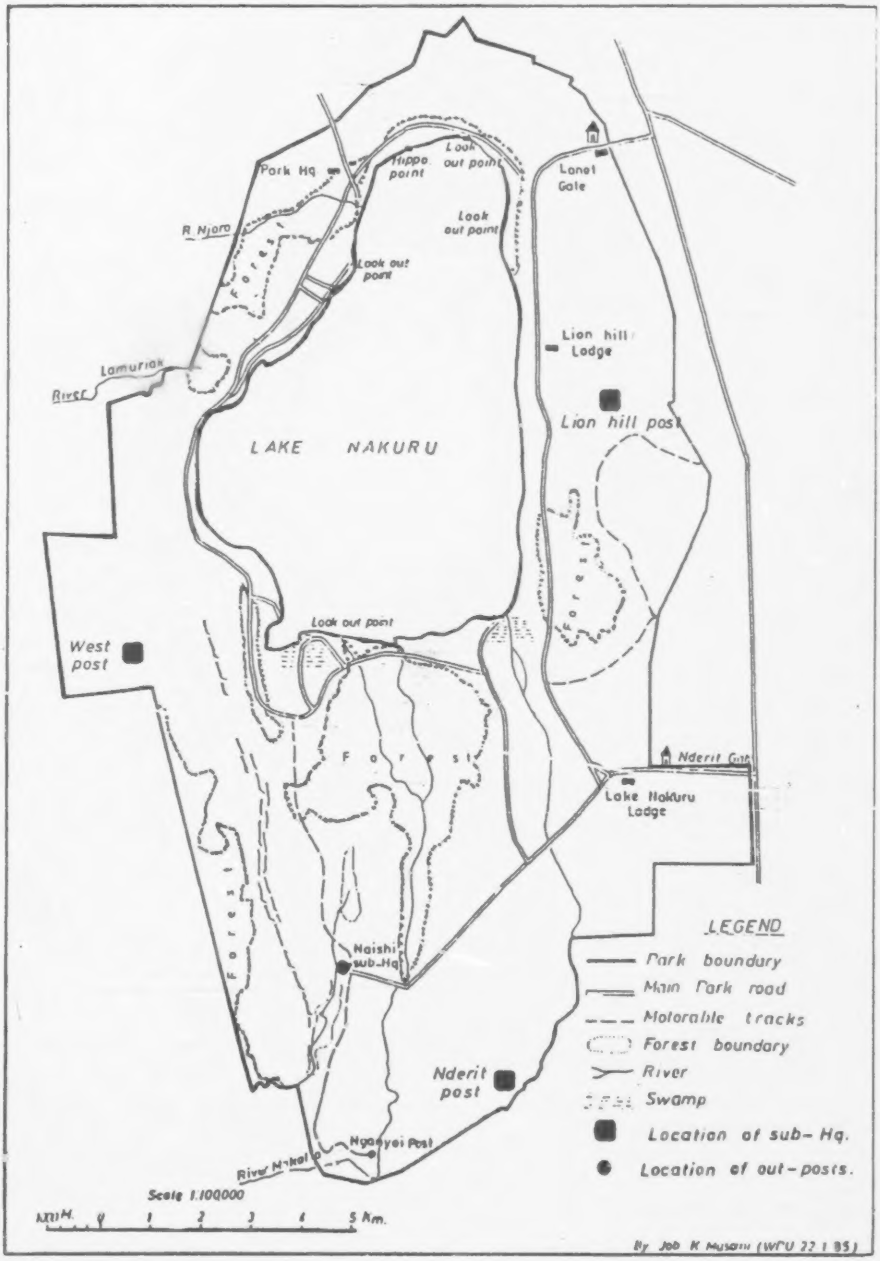
N.B. (1) Additional Surveillance Units in the Masai Mara National Reserve and the Ngeng Valley which equate to the above Aberdare and Nairobi Park units, are being financed by WWF/IUCN and The Eden Trust/German Aid Project respectively.

(2) All other requisite resources and equipment will be provided and funded by the Kenya Government input.

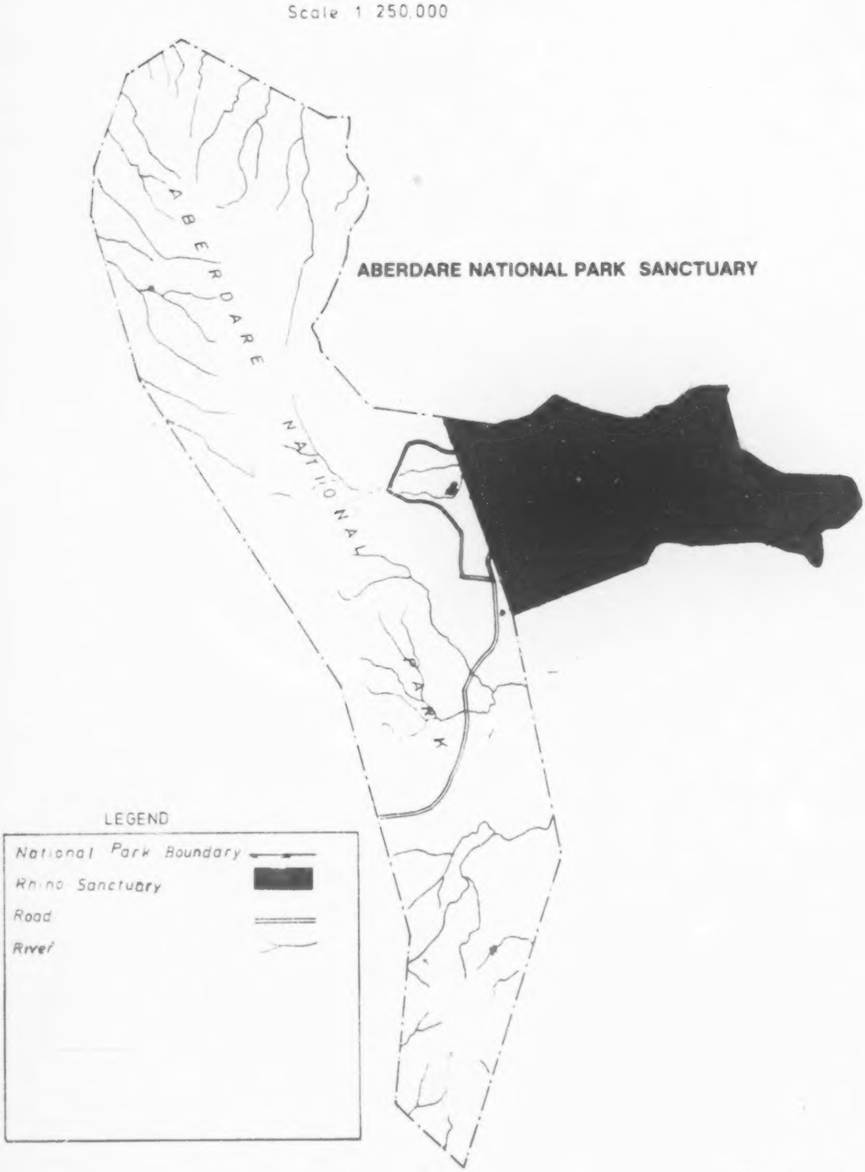
e.g.
- personnel, uniforms, equipment and accommodation
- aircraft, vehicles, road plant and radios
- requirements for further research and management studies
- water supplies, road networks
- all other infrastructure requirements.

(2) Estimated costings in respect of vehicles and radio equipment are quoted free of Kenya duty and sales tax.

NAKURU SANCTUARY


Park Hq
Hippo point
Look out point
Lanet Gate
Look out point
R. Njoro
Forest
Look out point
Lion hill Lodge
Lamuriak River
Lion hill post
LAKE NAKURU
Forest
Look out point
West post
Forest
Nderit Gate
Lake Nakuru Lodge
Forest
Naishi sub-Hq
Nderit post
Ngonyoi Post
River Makalia
LEGEND
Park boundary
Main Park road
Motorable tracks
Forest boundary
River
Swamp
Location of sub-Hq.
Location of out-posts.
Scale 1:100000
0 1 2 3 4 5 Km.

By Job K Musau (WCU 22 1 85)

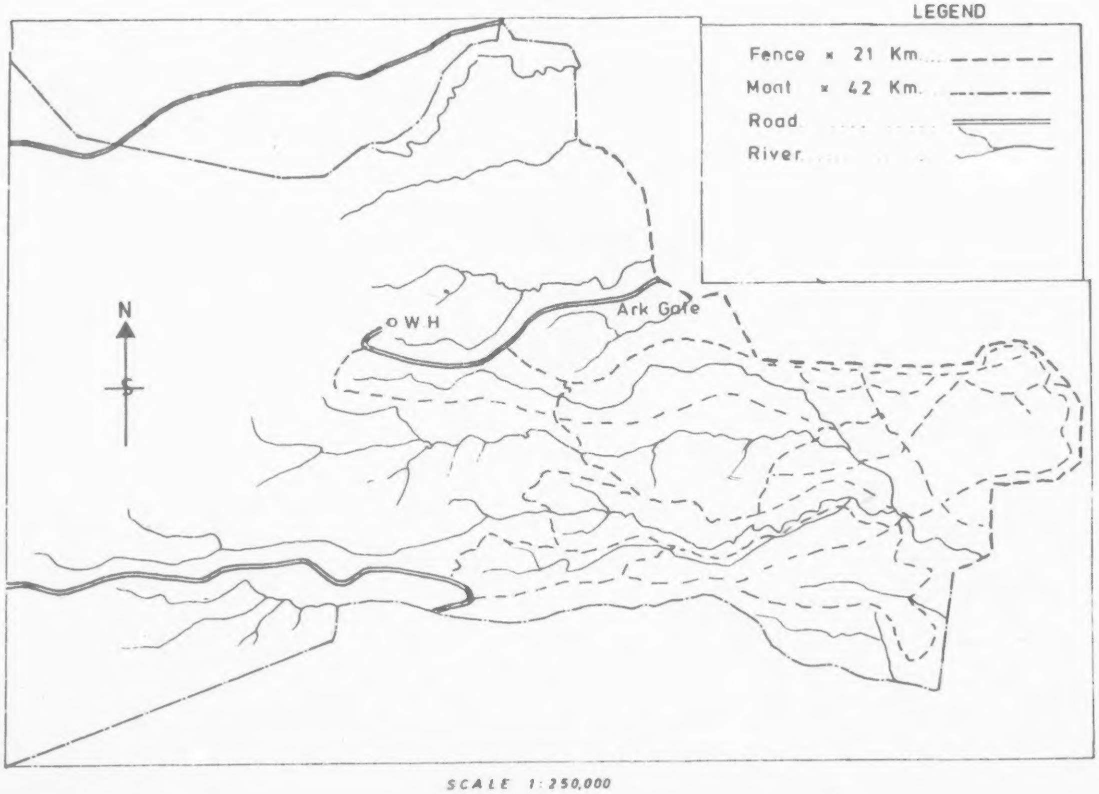


ABERDARE NATIONAL PARK SANCTUARY

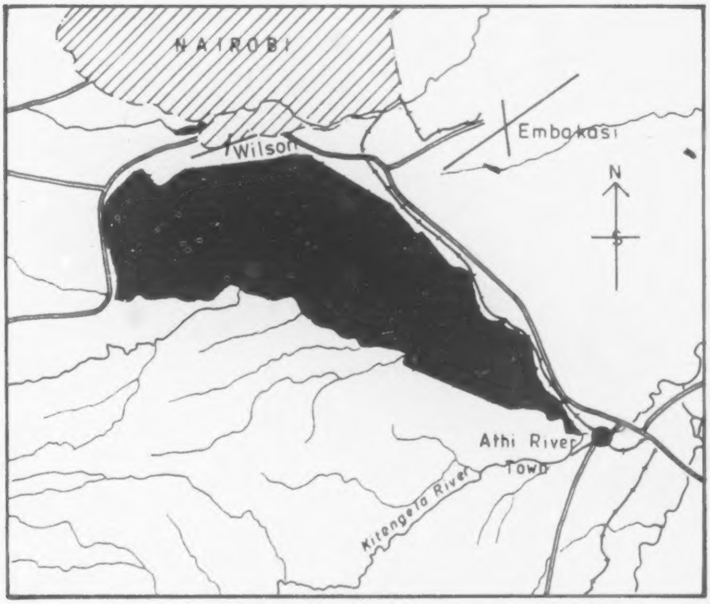
Scale 1 250,000
ABERDARE
NATIONAL
PARK
LEGEND
National Park Boundary
Rhino Sanctuary
Road
River

20

ABERDARE NATIONAL PARK (SALIENT FENCE AND MOAT).


LEGEND
Fence × 21 Km
Moat × 42 Km
Road
River
N
o W.H
Ark Gate
SCALE 1:250,000

NAIROBI NATIONAL PARK SANCTUARY


NAIROBI
Wilson
Embakasi
N
Athi River Town
Kitengela River

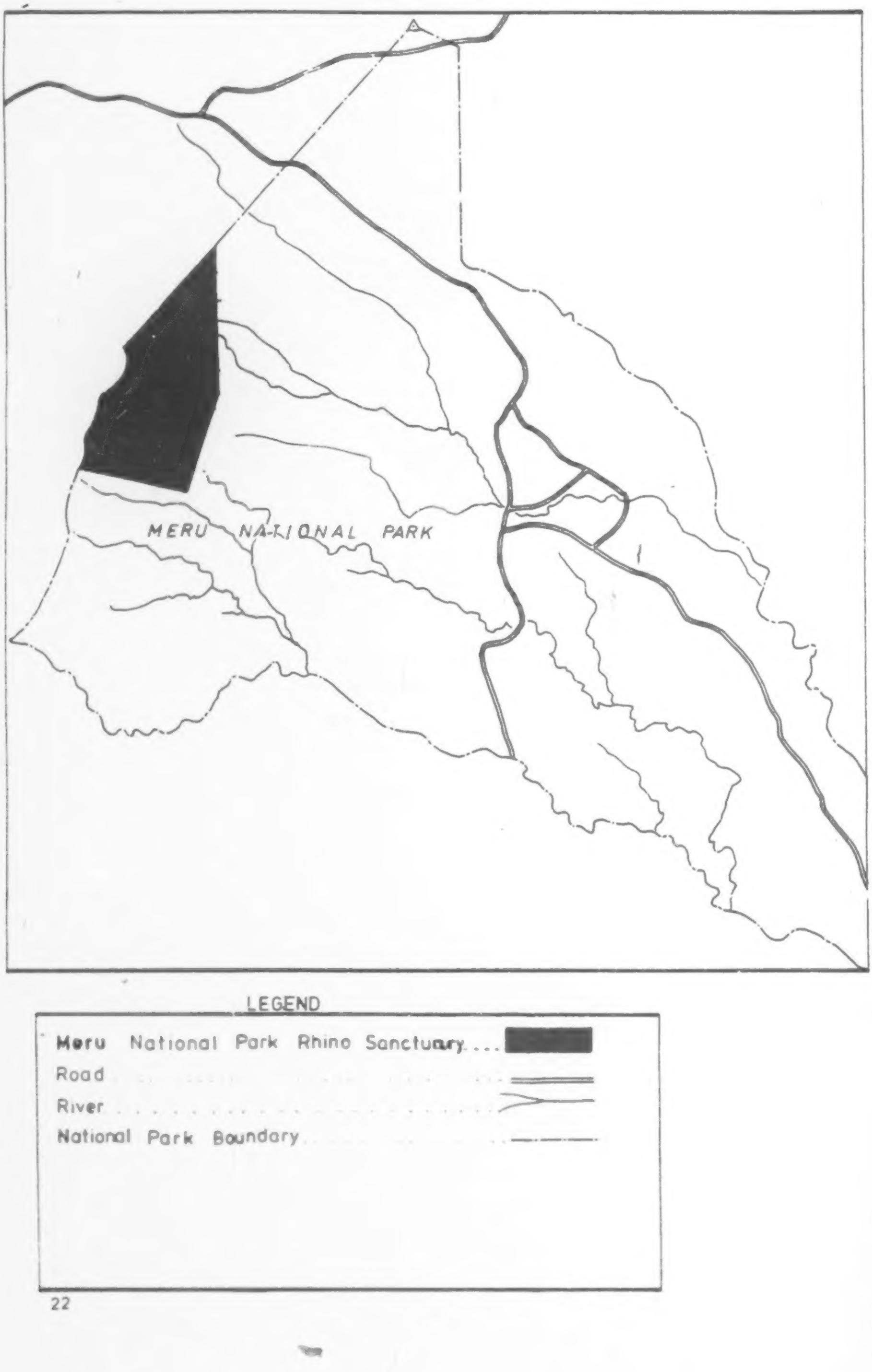
Scale 1.250,000

LEGEND

Nairobi National Park Rhino Sanctuary	■
Nairobi Town	▨
Road	═
River	≻
Railway	┼─┼

MERU NATIONAL PARK RHINO SANCTUARY

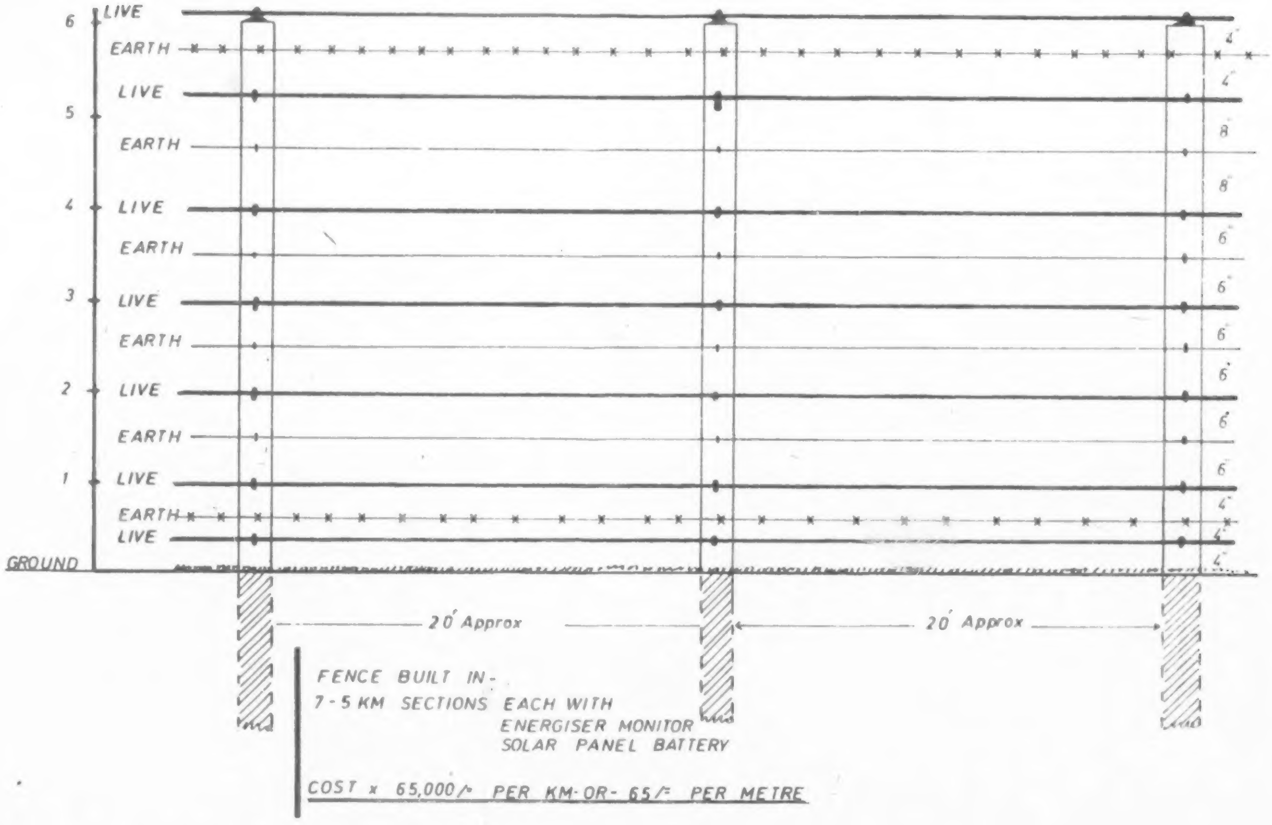
Scale 1:250,000


MERU NATIONAL PARK
LEGEND
Meru National Park Rhino Sanctuary ....
Road ....
River ....
National Park Boundary ....

22

APPENDIX IV

Design of Standardised Rhino/ Sanctuary Fence.


6
5
4
3
2
1
GROUND
LIVE
EARTH
LIVE
EARTH
LIVE
EARTH
LIVE
EARTH
LIVE
EARTH
LIVE
EARTH
LIVE
4"
4"
8"
8"
6"
6"
6"
6"
6"
6"
4"
4"
4"
20' Approx
20' Approx

FENCE BUILT IN-
7-5 KM SECTIONS EACH WITH
ENERGISER MONITOR
SOLAR PANEL BATTERY

COST x 65,000/- PER KM OR- 65/- PER METRE

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Willoughby, Capt. Sir John Bt. (1889) - "East African and its Game" - Longmans, Green & Co., London.

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"Development and Management Plan - Nakuru Rhino Sanctuary".
"Proposals for Future Rhino Sanctuaries".

Mr. SCHEUER. In other words, you simply hope to take the fences down one day in the future?

Mr. SINDIYO. Well, we might retain those depending on the circumstances at that time.

Mr. SCHEUER. Yes.

Mr. SINDIYO. If we have to, we would be delighted to do so.

Mr. SCHEUER. Thank you very much.

Dr. Esmond Bradley Martin.

STATEMENT OF ESMOND BRADLEY MARTIN, AUTHOR

Mr. MARTIN. Mr. Chairman, first I would like to thank you very much for inviting me to come and talk with you this morning. Daniel Sindiyo and I have come all the way from Kenya, and we'd also like to thank Rhino Rescue for supporting airfares and other expenses here. I'd also like to thank the other wildlife organizations that have funded me since 1978 to carry out an international study of the trade such as World Wildlife Fund, African Wildlife Foundation, and others.

So how long would you like me to talk for?

Mr. SCHEUER. Well, take your 5 or 6 minutes.

Mr. MARTIN. Five or six minutes.

Mr. SCHEUER. Go off the record.

[Off the record.]

Mr. SCHEUER. Of course, your prepared testimony will be printed in full at this point in the record.

Let me say we, too, are very grateful to Rhino USA for having brought you here, for your consistent support of this cause, and we're also grateful to you for having come. It's a long trip. It's tough on the human condition to make that round trip for just a brief period here, and we know it's somewhat of an ordeal. We're very grateful to you and look forward to your testimony.

Mr. MARTIN. Thank you, sir.

I think it's very important to state that the decline of the rhino is really unique. Of all the large mammals in the world over the last 15 years, no other mammal——

Mr. SCHEUER. Excuse me. Could you pull your mike a little bit closer?

Mr. MARTIN. Yes. Yes, sir.

I think it's important to note that the decline of the rhino is unique. Of all the large mammals in the world, since 1970 there's been no equivalent decline of any other. We've had approximately an 80- or 83-percent decline of all species of the rhino. We estimate in 1970—we estimate that there's been a decline of over 80 percent for all the five rhino species since 1970. We estimate that in 1970 there were about 70,000 rhinos in the world, and now we believe there are about 11,000 and they're going down quite quickly.

For instance, the black rhino we estimate about 65,000 in number in 1970 and there are only 4,500 today. So it's extremely dramatic.

Now the main reason for this decline over the last 15 years has been poaching. Over a longer period of time of course it's been habitat destruction as well.

But what has happened is that in the Asian countries, which are taking 99 percent of all the rhino products, the economies have grown very quickly. There's been a tremendous demand for various rhino products.

Over the last few years perhaps 50 percent of all the rhino horn put on the world market has been going to North Yemen—we discussed that—in making of dagger handles. We have photographs over here on the left of how that rhino horn is used.

The remaining 50 percent has been going mostly to eastern Asia where it is used for medicinal purposes, mostly for lowering fever, not for sexual purposes. The Chinese and Japanese and other eastern Asians have never, never used rhino horn as aphrodisiacs. This is a Western myth that is completely wrong.

It is very, very important to know what the real reasons or the real uses for rhino products are. The only thing that hasn't been discussed this morning is that all parts of the rhino are valuable in Asia—the bones, the horns, the skin, the dung, the toenails. So in Asia the animal is extremely valuable.

Now the real reason the rhino is declining is because they all have economic use. The question is, what can we possibly do about it? Are there any solutions? And there are solutions.

There are certain countries in Asia which protect their rhinos very well. Nepal is one. Nepal is a very poor country, but there's been hardly any poaching.

So there are two general ways of saving the rhinoceros. One is to protect them in situ, where they are, and Mr. Sindiyo has talked about the Kenyan plan for fencing them in. The other one is to reduce the trade, reduce the demand, and that's what I've been working on for the last 8 years.

We talked briefly about the problem with North Yemen and Singapore, but they're not the only places that's trouble. In China, for instance, they are importing rhino and also using up old stocks of rhino to make medicines which are then exported to earn quite a bit of money. This is technically legal because of CITES regulations because you can't identify the rhino horn, but I think some pressure needs to be put on China to stop this.

Brunei, a relatively new, independent country—the sultan of Brunei allows imports of rhino products. A little bit of pressure needs to be put on them.

There are various countries that are acting as entrepots. The United Arab Emirates, which is a CITES member, has been criticized by the CITES secretariat has handling lots of rhino horn which is going to North Yemen and is going to eastern Asian.

So what we need to do is to encourage those countries which have the laws to enforce the laws concerning rhino horn trade, and those few countries that don't have the laws to bring in the laws. For instance, Burundi is one of those countries, a major exporter from Africa, and it's perfectly legal. Djibouti is another one which hasn't been mentioned. That needs to be done.

Also, much more effort needs to be done for substitutes. This hasn't really been emphasized yet. The important point is that these dagger handles, some of them are made out of rhino horn, but approximately 93 percent are not made out of rhino horn. In other words, they're made out of substitutes, mostly cow horn, water buffalo horn from eastern Asia. It's an extremely important point—that they're already using substitutes, and we need to push a little bit more on that.

As I said earlier, rhino horn in eastern Asia is mostly used for lowering fever, but there are other substitutes fully acceptable by the Chinese and Japanese and other Asian peoples. The substitutes are cow horn, water buffalo horn, and certain antelope horns. We need to push on this. Unfortunately, we don't have the money to do this, but some countries have been quite successful. Japan has been extremely successful on that.

And, finally—because I know that time is running short—we need to know more about how the trade actually works. How is the horn leaving Africa? Where is it going? I have been covering this on and off now for the last 8 or 9 years, but, unfortunately, I'm the only one really doing this as a full-time job and I have to cover at least two continents. And the reason for this is the lack of funds. We need to know much more information of how the horn is moving in and out of the various countries and the other rhino products.

Thank you.

[The prepared statement of Mr. Martin follows:]

BEFORE THE SUBCOMMITTEE ON
NATURAL RESOURCES, AGRICULTURE
RESEARCH, AND ENVIRONMENT OF
THE COMMITTEE ON SCIENCE
AND TECHNOLOGY

UNITED STATES HOUSE OF REPRESENTATIVES

Hearings on the Plight
of the Rhinoceros as an
Example of the
Rapid Loss of the
World's Species.

Statement of

Dr. Esmond Bradley Martin

Mr. Chairman, Members of the Subcommittee and Staff:

My name is Esmond Bradley Martin. I am the Vice-Chairman of the African Elephant and Rhino Specialist Group. I have written numerous books and articles on the status of the rhinoceros and the trade in rhino horn. I have also worked for many years to end the trade in rhino horn.

I appreciate the opportunity to appear before this subcommittee on this urgent matter. I would also like to thank Rhino Rescue USA, Inc. for funding my travel from Kenya so that I might testify here today.

The Decline in Rhino Populations

Of all the large animals in the world, none has declined so dramatically as the rhinoceros during the past sixteen years. Its estimated world population of 70,000 in 1970 has dropped to 11,500 today, an 84% loss.

There are five species of rhinos, two in Africa and three in Asia. Africa's white (or wide-lipped) rhino, the largest, has virtually disappeared from its northern range, except for a guarded population of seventeen in Zaire and a few individuals in Southern Sudan. However, it numbered several thousand in 1970. The southern white rhino, of which there are 4,000, exists mainly in South Africa and, for the time being, is secure there. It is the only rhino species which is not severely threatened. The black rhino, which was once widespread in tropical Africa, has decreased the most startlingly: in 1970 there were 65,000, in 1980 15,000 and now only 4,500 are left. In not one country of tropical Africa is the black rhino safe. Moreover, the majority of those surviving are in small, unstable pockets and if the fragmentation process continues, there is little hope for them to meet and mate.

During the past six years, rhinos have been almost or entirely eliminated from Angola, Chad, Ethiopia, Mozambique, Rwanda, Somalia, Sudan, Uganda and Zaire. Other countries have had their rhinos heavily poached. In the Central African Republic (CAR) less than 200 remain whereas six years ago there were 3,000. Kenya's rhino population has fallen from 20,000 in 1969 to about 500 today.

It had been thought that the black rhino would remain relatively safe in some of its more remote and secluded habitats, but now even these strongholds are being hard hit. Rhino numbers in the Luangwa Valley, Zambia, have fallen from over a thousand two years ago to probably less than 300. Similarly, in Tanzania's Selous Game Reserve, rhinos are vanishing; reports suggest that they are being obliterated by poachers. Even in Zimbabwe's well protected Zambezi Valley rhino poaching has become a serious threat; Zambians will risk their lives to cross the river border to seek after a rhino.

In Asia, the number of Javan, Sumatran and Indian rhino species are much fewer. There are only 55 Javan (known also as the lesser one-horned) rhino in one small reserve on the western end of Java island. It is actually one of the rarest animals of the world, and 10% of its population was killed by disease four years ago.

The Sumatran (or hairy) rhino, which is the smallest and most primitive, has almost disappeared from Burma, Thailand and Indochina. Of the 700 left in Malaysia and Indonesia, practically all are threatened by logging disturbances, farming, growing human settlements and poaching. Consequently, the hairy rhino has become solitary in its habits, and there is even less hope for the animals to meet and mate then there is for the African black rhino species.

The greater one-horned (or Indian) rhino lives in two wildlife reserves in Nepal and in India's states of Assam, West Bengal and Uttar Pradesh. However, a breakdown in law and order, both in Assam and West Bengal, brought about an upsurge in poaching between 1981 and 1985. Firearms superior to those used by forest guards have been supplied to poachers by syndicates in Nagaland. In West Bengal the rhinos have been reduced to less than 40, and in Assam, home of over three-quarters of this species' population, 233 rhinos have been killed during the past four years. The Indian rhino now numbers only 1,700.

Reasons for Rhino Poaching

Loss of habitat, which used to be an important factor in the decline of rhinos, especially in Asia, has paled into insignificance, compared to the toll taken by poachers since 1970.

In countries where rhino poaching is most rife, you usually find inefficient government bureaucracy, economic instability, strict control of foreign exchange, local currency pegged at artificially high rates and poor game management with few deterrents to prevent people from engaging in the illegal killing of animals.

Some conservationists believe that the illegal killers of rhinos are badly paid and grossly exploited by middlemen. This is often not the case. In Zambia poachers make about a third of the world market price. In Kenya, according to a survey carried out in and around the Tsavo area in 1983, hunters for rhinos were getting the equivalent of $370 a kilo for the horn, which was more than half the world market price at that time.

Prices for African rhino horn have risen from $30 a kilo wholesale in 1970 to about $700 today, and for Asian rhino horn from $2,000 to $9,000 a kilo wholesale. A poacher can make from the sale of one rhino horn as much as three times what he might legitimately earn in a year.

The Markets for Rhino Products

For a long time, Westerners believed that rhinos were being killed for their horns which were used as aphrodisiacs in the Far East. Research in the late 1970s shattered this myth. Only a small group of Gujarati Indians in western India consider rhino horn a love potion. However, since ancient times, the Chinese have believed in the efficacy of rhino horn for curing a multitude of ailments, ranging from high fewer and hallucinations to snakebites and nosebleeds; it is indeed one of their most highly prized drugs, and they have spread their beliefs about the important medicinal powers of rhino horn to the Japanese, Koreans and Burmese who likewise use it -- and never as an aphrodisiac. Throughout eastern Asia there are Chinese medicine shops where not only rhino horn is available, but also rhino hide and toe nails. Occasionally, one can also find rhino bone, dried dung and dried blood. The hide is used to treat skin diseases; toe nails are used for the same purposes as horn but are cheaper and are not believed to be as strong a medicine. Poultices are made of rhino bone and placed on people's broken limbs to ease the pain and promote quicker healing. The dung is taken as a laxative, and the blood is used to treat general lethargy and vitamin deficiencies. In fact, practically every part of the rhino has some medicinal value in Asia, and the animal is a veritable pharmacopeia. Still, it is the horn which is most in demand, and aside from a little hide supplied by South Africa, it is just the horn from African rhinos that is sold in Asia -- all the other remains of a rhino carcass are left to rot in Africa.

During the 1970's, there was tremendous growth in the economies of Hong Kong, Singapore, Malaysia and Japan. Demand for rhino horn soared, and people in eastern Asia were willing to pay the higher prices for it.

There was also the emergence of a new market -- North Yemen. This small Arab country, poor and insignificant, underwent a revolution which opened its doors to the outside world with the result that Yemeni men began going to Saudi Arabia and the Gulf States as migrant workers. They brought back home a billion dollars a year in the 1970s, and with this money they were able to afford the goods they wanted to buy. Chief among these were daggers with handles carved from rhino horn, formerly the prerogative of the Iman and his cronies. Wearing a dagger was part of everyday dress for all men and boys over the age of twelve. Usually, the handles were made from cow horn, but the very few elite of North Yemen traditionally had daggers with rhino horn handles, well carved and adorned with gold coins.

Suddenly, many people had the means to indulge in the purchase of this most prestigious of possessions. Between 1969 and 1977, according to the country's official trade statistics, 22,645 kilos of rhino horn were imported, coming from about 8,000 rhinos. By the late 1970's North Yemen was importing nearly 50% of the rhino horn sold from African, and it had become the largest market in the world for rhino horn. A black rhino carries, on average, almost three kilos of horn, and one kilo will make three dagger handles. The dagger-makers' business in the Sanaa souk flourished, and the traders had little difficulty in supplying the demand.

At this time, gangs of Kamba and Somali poachers had invaded Kenya's parks and were hunting both elephant and rhino. In Uganda, under General Idi Amin's rule, chaos reigned. Soldiers used the wildlife for target practice; and when civil war broke out, almost all the rhinos were eliminated. The wave of poaching hit northern Tanzania, also. It was believed that 90% of the rhinos there were killed by late 1979. In many parts of Africa, automatic weapons proliferated, due to the prevalence of local wars. The small-time poacher, with his bow and arrows or clutch of snares, gave way to heavily armed men, unopposed by the authorities, who wiped out rhinos by the score in the CAR, Mozambique, Zaire, Sudan and Chad.

Action Taken to Remedy the Rhino Situation

Conservationists were stunned by the massive slaughter of rhinos in Africa during the 1970s. They had realized that human population growth and economic development would sooner or later exert pressure on the land, but they had pinned their hopes for the future on wildlife in preserves which they set up in the countries with the largest groups of wild animals. The parks and reserves were truly outstanding, had the support of local leaders who often enlarged them and boasted of their success in attracting tourists from all over the world. Indeed, the wildlife seemed to thrive in the protected areas, and there were even cases where excess numbers of elephants and hippos had to be culled. Millions of dollars were poured into the wildlife preserves by conservation organizations, and since the financial support had proved successful in the early days of Independent Africa, more millions were given to wildlife departments to try to halt the rhino poaching.

However, there was lack of political stability in many of the countries which led to the disregard of existing laws to combat poaching, the inability of judiciaries to prosecute offenders, and disillusionment about the benefits of wildlife sanctuaries when tourists stayed away from the countries experiencing strife.

No amount of new vehicles, aircraft for surveillance, radios and other items for anti-poaching could stop the illegal killing of rhinos in places where there was no infrastructure left to protect people, let alone wildlife. Only in the countries where security was maintained was there any hope at all for the rhinos, and even in these the animals must now be kept behind well patrolled fences.

Granting protection to rhinos in situ is one of two general approaches to the rhino problem. The second, combatting the root cause of poaching -- the rhino horn trade -- did not begin until after 75% of the rhinos had been killed in the 1970s, and it has been limited to some extent by scarcity of funds. Only about $100,000 has gone into this strategy but since 1979 the trade has been continually monitored; and, moreover, we have recently made some strides towards promoting the use of substitutes for rhino horn.

The main means to stopping the international trade in rhino products has been the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which was formulated in 1973 to curb the trade in all endangered species, including rhinos. Now, most of the countries which have rhino populations and those which are main consumers of rhino products have ratified this Convention. Its influence has also led to the banning of rhino horn imports in a few countries which are not signatories to CITES. Support for CITES has come strongly from the World Wildlife Fund, the African Wildlife Foundation and the New York Zoological Society which have coherently put pressure on governments to uphold its tenents.

Hong Kong had been the main importer of rhino horn from the end of World War II up until 1979 when it agreed to conform to CITES regulations, even though it could not become a member because of its colonial status. The Department of Agriculture and Fisheries then requested that all traders of rhino horn and hide in Hong Kong to register their stocks; they declared that they had 2,167 kilos of horn and 2,000 kilos of hide. During the next six years most of this stock was legally exported, but in allowing it to be the government was abetting the trade. In late 1985, the Department of Agriculture and Fisheries announced that no more sales abroad of the old stock would be permitted after March, 1986.

Small amounts of rhino products had been coming into Macao for many years to supply the Chinese medicine shops, but in 1984 this became one of the world's largest rhino horn importers. A Portuguese-administered territory under China's sovereignty, with only 360,000 people, it was obviously acting as an entrepot, and despite the fact that both China and Portugal are CITES members, Macao's imports and re-exports of rhino horn were legal. All that was needed in 1985 to bring in rhino products was an import license, which was easy to obtain from the authorities. However, towards the end of that year, some members of the government became embarrassed by international criticism of the wildlife trade, and the government decided, through the Economic Services Department, to refuse to issue any more import licenses for rhino horn after December, 1985. Furthermore, Macao agreed to conform to all the CITES regulations in February, 1986.

Statistics showed that Taiwan imported 416 kilos of rhino horn legally between 1980 and 1984. In addition, considerable amounts were being smuggled in to avoid paying import duties. On account of the fact that in 1985 Taiwan was one of the largest importers of rhino horn and hide, considerable pressure was put on to the government to stop the trade, especially by Tom Milliken, Director of TRAFFIC, Japan. Fortunately, one of the Ministers of State, Mr. Chang Feng-Shu, also the head of Taiwan's Society for Wildlife and Nature, was extremely concerned and lobbied with other ministers and heads of government departments about the rhino horn and hide imports. In mid-1985, when he received a letter from Prince Philip, President of the World Wildlife Fund, encouraging the government to close down this commerce, he was able to persuade it to do so with immediate effect.

International pressure was also applied to South Korea to stop its imports of rhino horn, most of which is used in making Chung Sim Hwan medicinal balls to treat high blood pressure, nose bleeds, paralysis and aches and pains. Bowing to the criticism from abroad, the Korean Ministry of Health and Social Affairs issued an order in November, 1983, demanding the elimination of rhino horn from Chung Sim Hwan and all other medicines. Further legislation was passed in 1985 by the Ministry of Trade and Industry, banning imports and exports of rhino products. In the meantime, scientists in the field of Oriental Medicine at the Kyung Hee University began carrying out experiments with water buffalo horn which they have now accepted as an effective substitute for rhino horn, and they are encouraging its use in Chung Sim Hwan balls.

Traditional medicine is an important part of Japanese culture, despite the fact that Japan is a modern, industrial world power. Millions of people there purchase herbs, minerals and animal products to cure anemia, high blood pressure and other such ailments, even though they generally rely on western drugs for most diseases. Rhino horn is considered by some Japanese as one of the "best" medicines for colds and fever, but other animal products are acceptable to them as substitutes. Since these are not derived from endangered species, their use should be encouraged. The most common substitute for rhino horn as a traditional fever-reducing drug in Japan is a dried worm, imported from Chino. In 1980 when the government banned rhino horn imports, it actively promoted the use of saiga antelope horn instead. The results have been satisfactory, and little rhino horn has been smuggled into the country since it was outlawed.

Efforts to reduce the trade in rhino products and to promote the use of substitutes are proving effective. In the late 1970s, eight tonnes of rhino horn reached the world market annually. By the mid-1980s, due to the scarcity of rhinos, it had dropped to approximately three tonnes. With this 62% decrease in supply, one would expect a correlated rise in price. However, the prices for both Asian and African horn have not increased since 1979. The horn is coming from a variety of places, so there is no monopoly position which might affect the price; it is also readily available in many countries of eastern Asia, and internal trade in it is often still legal. Unquestionably, the demand for rhino horn has gone down considerably.

Immediate Requirements for Curtailing the Rhino Trade

The single greatest problem concerning the trade in eastern Asia is Singapore which still legally allows imports and exports from all rhino species. This open market is primarily responsible for the rhino poaching in India, Indonesia and Malaysia. The government has prevaricated about joining CITES since 1984, and not only has Singapore now become the most important entrepot for rhino horn, it is also one of the large consumers of Asian rhino products today. Diplomatic and media pressure need to be strongly exerted on Singapore to bring in a law specifically prohibiting imports and exports of rhino products as it has already done for urinating, birds of paradise and arowana fish.

Brunei, an oil-rich Sultanate on the island of Borneo, also allows imports of all rhino species products for its population of 55,000 Chinese residents. Approaches have been made to the government to stop the trade; Prince Philip wrote to the Sultan in March, 1986, but there must be continued lobbying. If imports and exports are not prohibited, this country could become an important entrepot for illegal trade from source countries, since most of its neighbours have banned rhino horn imports.

China is a member of CITES, and very little horn is found for sale in its medicine shops. However, China is a major producer of patent medicines which contain rhino horn, and these are marketed throughout eastern Asia. Advantage is taken of the fact that CITES allows endangered species to be traded when they are not viable components in a product. Although some medicine factories in China are beginning to use water buffalo and saiga antelope horns in place of rhino, China must be persuaded to stop manufacturing and exporting any drugs with rhino horn as an ingredient. The factories have been illegally bringing in the horn from Macao and Thailand.

The Thai authorities have done very little to enforce their ban on imports and exports of rhino products. The country has become a major entrepot for Asian rhino horn, hide and toe nails, even though the trade has been illegal for several years. In 1985, a survey indicated that 34% of the Chinese medicine shops in Bangkok sold rhino horn. The government needs to be encouraged to enforce its law against the rhino trade.

Similarly, the United Arab Emirates have a ban on imports and exports of rhino products but do not pay much attention to it.

In Africa, Burundi, which has no rhinos of its own, exports large quantities of rhino horn. Its central location on the continent enables the horn to be moved in and out with relative ease. So far, this trade has not been outlawed by the government, and in order to stop it pressure will have to be put on Burundi.

In August, 1982, following an impressive campaign initiated by the African Wildlife Foundation, imports of rhino horn to

North Yemen became illegal. However, poachers and middlemen are willing to take risks in continuing to supply the horn to the country because the demand is so great and the financial return so profitable. Perhaps as much as one and a half tonnes per year are still bought by known importers. The horn is often smuggled through customs at Sanaa airport in personal luggage. Stricter controls need to be initiated,and the export of shavings from the carving of rhino horns must be stopped.

It is equally necessary to reduce the demand for rhino horn. In North Yemen, all duties should be eliminated on cow and water buffalo horns. Handles carved from these should be made more attractive by adding elaborate and expensive decoration and fitting them with higher quality blades. It should also be explained to the craftsmen why they should not use rhino horn; few of them know anything at all about rhinos.

In eastern Asia, methods which have been used to decrease the demand for rhino horn in medicines must be continued. Water buffalo and saiga antelope horns are plentiful and cheaper than rhino. Traditional doctors' associations and pharmacists have been asked to accept and prescribe these instead of rhino horn, but efforts to encourage this must not wane.

Intelligence gathering on the patterns of international trade in rhino products need to be improved in order to prevent the development of new entrepots and to learn ways to combat more efficiently illegal movements of rhino horn. Continual monitoring of the trade is imperative, not only for the purpose of collecting data on illicit trade routes in Africa and Asia but also to find out where rhinos are most threatened in situ and to learn ways of granting them better protection.

The rhino castastrophe calls for close international co-operation in stopping the trade. So sharp and dramatic a decline of the second largest land animal is hard to accept in this age of conservation and wildlife awareness.

Mr. **Scheuer**. Well, thank you very much, Dr. Martin.

What is responsible for the relative success that—well, the two countries that you mentioned—Japan and Nepal have had in suppressing this trade in rhino horns? Let's take Nepal first because that would be a habitat country.

Mr. **Martin**. Yes. Nepal is one of the poorest countries in the world. It has about 350 rhinos, and those numbers have been down in the sixties to 100. The answer to your question is that the King of Nepal, who is the head of state, has a personal interest in those rhinos, and that is one of the most important things. If a head of state is interested in conserving the species, it can be done.

How the King of Nepal has done it is that he's got 500 people in the Royal Nepali Army in the main reserve, Royal Chitawain National Park, and there are 200 forest guards outside of it.

But the answer to it is very simple: The head of state is interested in conserving the animal.

Now as far as Japan is concerned, Japan was a major importer of rhino horn and has been for over a century. What happened was when Japan joined CITES in 1980, the Government immediately contacted the local medicine shops that were selling rhino horn and encouraged them to use substitutes. So every single medicine shop in the country that had been selling rhino products received a letter saying that they should use substitutes, and that was Saiga antelope horn. It has been very successful. There's hardly any rhino horn being smuggled into Japan today.

Mr. **Scheuer**. Well, that's encouraging on both counts.

Congresswoman Claudine Schneider.

Ms. **Schneider**. The only question that I have—I will say that the testimony of you was very succinct and detailed, so I think you've answered most of the questions I was anticipating of asking.

But I wonder, Dr. Martin, if you have some specific proposals that the U.S. Government could follow insofar as eliminating the trade in rhino products.

Mr. **Martin**. I think the most important thing that the U.S. Government could do is to put pressure on those countries which do not have laws prohibiting the trade, and they would be Burundi, Djibouti, and especially Singapore.

The importance of Singapore is not that they're handling a lot of African horn; they're not, but they're handling almost all the Asian horn that's on the world market.

In India, which had a very small Indian rhino population at the turn of the century, we estimate under 50. They built this number up to over 1,000 in the early eighties. Then, beginning in 1982, there's been severe poaching of the Indian rhino because almost all that horn moves out of Calcutta down to Singapore. If that outlet wasn't there available in Singapore, the poaching would decrease very sharply.

The other Asian horn that's on the world market is from Simatra, which is right next door to Singapore, and also some animals are being killed in Malasia, specifically in Sava, and all of that goes over to Singapore. So Singapore is the single most critical country in the world for the Asian horn. The most critical one for the African horn is North Yemen.

So the Government could put pressure on those countries which don't have a law. Second, the U.S. Government could help in encouraging countries to implement their legislation better. We talked about North Yemen before; I don't need to talk about it any more. But the United Arab Emirates is a problem. The CITES secretariat is very concerned about that.

But we've had successes on this. Eighteen or nineteen months ago there were five Asian countries that legally allowed rhino horn imports. We're down really to, say, one and a half because Brunei has legislation prohibiting exports.

But if one goes around and encourages countries to close down the trade, they will do that. South Korea has recently done it. Macau has recently done it. Taiwan has done it, and Hong Kong has just stopped all exports of old stock in April of this year. So it can be done, and it doesn't cost much money. It's just pressure.

Ms. SCHNEIDER. Understood.

Well, let me say that oftentimes, as you are out tracking the rhino and tracking the poachers, you probably wonder to yourself, Does anybody really care that you're out here doing this or does anybody really know? Let me say that I certainly do, and I assure you that the other Members of Congress and people throughout this country and throughout the world are always thrilled when we find someone that is as dedicated as you are to this effort.

So let me just give you a big appreciation for these efforts because there are too few people who are willing to dedicate their lives to such a thing. We thank you.

Mr. MARTIN. Thank you.

Mr. SCHEUER. Just following up on Congresswoman Schneider's question, Is Singapore, then, the last remaining villain in this, the last remaining significant villain, other than Brunei being half a minor villain?

Mr. MARTIN. I'd rather not use the word "villain." It's the single most important problem in eastern Asian. Singapore must be encouraged to bring in a law.

One thing that we haven't mentioned is that when Singapore brings in the law, they'll enforce it. There are various countries in Asia who have brought in the law and have not enforced it, but Singapore will, which makes it especially important for them to bring in the law. So that's the last country of significance that doesn't have legislation.

Then the other one was we need more pressure on North Yemen to implement the law. Again, what hasn't been brought up about North Yemen is that they prohibit the importation of horn; they do not prohibit the export of horn. So what we need to do is encourage the North Yemenese to bring in a law prohibiting the exports. This is important because when you make these dagger handles, there are chips and powders that are left and then they reexport it and make money out of it and it has to go somewhere, and it's been going places.

Mr. SCHEUER. Yes.

You mentioned to me before, Dr. Martin, that Prince Philip—is it Prince Philip?

Mr. MARTIN. Yes, sir.

Mr. Scheuer [continuing]. Is chairman of the World Wildlife Federation?

Mr. Martin. He's president of the World Wildlife Fund International.

Mr. Scheuer. Yes; and he has made personal representations to Prime Minister Lee of Singapore, has written him?

Mr. Martin. Yes, sir.

Mr. Scheuer. Has he met with them?

Mr. Martin. He wrote a letter at the end of last year to the Prime Minister of Singapore who answered it almost immediately saying that they would be joining CITES perhaps by the end of this year. He's also written letters——

Mr. Scheuer. To Prime Minister Lee?

Mr. Martin. Prime Minister Lee has written a letter back saying——

Mr. Scheuer. Yes.

Mr. Martin [continuing]. That they hope to join CITES by the end of this year.

I was in Singapore in February of this year trying to push them to bring in a regulation specifically barring rhino horn imports because they've done that with orangutans, birds of paradise, and the rare arawana fish, but for some reason that I'm afraid I cannot state because I don't know, they will not do it.

As you rightly said, tomorrow or within hours the Prime Minister could say no more rhino horn imports, which is a separate issue from CITES, and that's what I would like to see. I have not been pushing them for CITES. It's a complicated issue. But I'm sure if someone can get to the Prime Minister of Singapore, he could turn that thing off tomorrow, which would have a major, major effect on preserving rhinos in the world.

Mr. Scheuer. Well, going off the record for a moment——

[Off the record.]

Mr. Scheuer. Going back on the record—my honored and distinguished colleague, Congressman Tim Valentine of North Carolina, one of the most forthcoming and hard-working members of this subcommittee.

Mr. Valentine. Thank you, Mr. Chairman.

I was really going to say some good things about you even before you said that. [Laughter.]

I want to associate myself with the remarks made by the lady, the distinguished Congresswoman. There are those of us in the Congress who are concerned about this problem, concerned not only about what happens to this precious animal, but many other species on the face of creation who are in danger of disappearing.

She has asked my question. I wanted to know—and I think you've answered it—what do you expect or what do you want the Congress to do about it, if you would explain that?

I want to say thank you to the chairman for arranging for you to come. I think it's very worthwhile.

I want to say, finally, that I hope that you will do the same thing that you are doing here in Washington before this subcommittee of the Congress—I hope that you will repeat this same thing with the Common Market countries of Europe and elsewhere because I feel—I don't know what you have done. Perhaps I should ask you if you have made this type of presentation to the British, for example, the West German folk, and Italians, because they should have a great deal of influence in this region and on these governments also.

Mr. MARTIN. May I answer that, sir?

Mr. VALENTINE. Yes.

Mr. MARTIN. Yes. The British high commissions in various parts of Southeast Asia have been extremely helpful to me. When I was in Singapore, the British High Commissioner was Sir Hamilton White. The night before I arrived he had a special meeting with Prime Minister Lee and he talked about this rhino horn situation. So the British are very, very helpful, but, again, they can't quite get it pushed through for reasons that I don't fully understand. But the British foreign office and the various British high commissioners in eastern Asia has set up appointments for me so I can get to the top people, and they've been very, very helpful.

Mr. VALENTINE. Thank you, Mr. Chairman.

Mr. SCHEUER. Thank you, Congressman Valentine.

Mr. Sindiyo, what is the attitude of the Kenyan people toward your effort to save the rhino, and specifically the country's conservation plan that you developed and the sanctions that you have against poaching? What kind of support do you get from the population out there?

Mr. SINDIYO. Mr. Chairman, the kind of awareness that now exists can best be demonstrated by two recent events that took place when we were trying to translocate two rhinos from different areas. Mr. Chairman, as a result of the awareness that has been created—and this has been done even by our own heads of state—the people in this particular area—and this will demonstrate—came up in arms saying, "We only have two rhino left here and we do not want these ones to be removed from our own places to any other park. Will you please look after them here, and if you cannot do that, then you give up."

Mr. Chairman, I'm trying to demonstrate the fact that the general public has suddenly become aware that there is something among them, a piece of their own heritage, that is threatened. And up to the local level people are now resisting any effort to try to do anything that will harm the wildlife population. There's a general feeling and we are very happy about it.

Mr. SCHEUER. Is there any peer group pressure by the general population against the poachers?

Mr. SINDIYO. Mr. Chairman, we have the youth club which is the Wildlife Club of Kenya, which is extremely useful. It's a very useful lobbying body for us. We have the Wildlife Society of Kenya and East African Wildlife Society, and we have other few groups that are really out and they're talking about it and this is influencing our cabinet position makers. We are pleased with the response of the general public even within our own government circles.

Mr. SCHEUER. I understand you have rather severe sanctions against poaching. Can you tell us about them?

Mr. SINDIYO. Severe what, Mr. Chairman?

Mr. SCHEUER. Sanctions, penalties.

Mr. SINDIYO. Yes, Mr. Chairman, OK, the courts are different altogether, but our laws provide for very stiff penalties. We have official offenses. If you are found committing anything criminal within a national park, then you lose everything and you can face up to about 10 years or 20,000 schillings or both such penalties in the event of committing a crime in a national park. They are very stiff.

Mr. **Scheuer**. Is it true that your—the guards who are guarding these sanctuaries have orders to shoot to kill as far as when they spot poachers?

Mr. **Sindiyo**. Mr. Chairman, I'd rather say that they are authorized to protect themselves and the wildlife. In the process, it all depends on the circumstances.

Mr. **Scheuer**. In the process what?

Mr. **Sindiyo**. In the process of doing—carrying out those duties, what they do depends on the circumstances.

Mr. **Scheuer**. On the circumstances.

Mr. **Sindiyo**. They may have to do that.

Mr. **Scheuer**. But they can use all necessary force?

Mr. **Sindiyo**. Right.

Mr. **Scheuer**. That's, of course, the general rule of thumb that our police have. Unfortunately, when we come to battling smugglers who are bringing drugs and other contraband into our country, we find that frequently our own police are outfinanced, outgunned, outmanned, and that the poachers have far superior technology and transportation, communication, fire power. That's what makes our drug interdiction efforts so very difficult. I suppose that you may have had the experience in your country of your poachers having superior fire power and communications to the security personnel who are trying to guard the animals.

Mr. **Sindiyo**. That's true, Mr. Chairman.

Mr. **Scheuer**. What is the relationship between the public effort—the Government effort, in other words—and private efforts to save the rhino in Kenya?

Mr. **Sindiyo**. Mr. Chairman, we have had a very broad relationship between the three sectors that you just mentioned. The Government has worked—gone out of its way to provide us what resources they can amid, of course, very competing demands. Now the private sector in the form of nongovernmental organizations, some of which are represented here, have been so useful that we have incorporated representatives of the nongovernmental organizations in our own national steering committee, so that they have the same chances, they have the same opportunities to bring in expertise as we expect or ask them to bring in resources.

Members of our public have responded to such efforts to make the activity working around the country—it has drawn a little attention, and they have responded to such kind of appeals.

So I would say generally that we have a very good working atmosphere at this time. What is left is to say what kind of support and Dr. Martin here, of course, has been contributing a hell of a lot in terms of information that we have even used to pass on and influence our own local communities.

Mr. **Scheuer**. Well, that's very impressive.

Going off the record again——

[Off the record.]

Mr. **Scheuer**. We have enjoyed your testimony and benefited from it very much, Mr. Sindiyo. We terribly much appreciate the effort and the energy that you expended in traveling here for the purpose of testifying before this committee. I congratulate you in the fine program that you have started.

I understand you have Mr. Wandera, secretary for political affairs, with you. We welcome him to the room.

And Mr. Wandera, yes, just raise your hand so we can all see you. We're delighted to have you with us.

[Mr. Wandera raises hand in audience.]

Mr. SCHEUER. Is Christine Stevens still here? Is Christine Stevens still here?

[No response.]

Mr. SCHEUER. We had the pleasure of Christine Stevens, one of the great fighters for animal rights in this country, and I'm sorry she left before I had a chance to introduce her.

This has been a splendid panel. You've both come long distances. We're very grateful to you. Thank you very much.

We'll now go to the last panel of the day: Curtis Bohlen, vice president of the World Wildlife Fund; Dr. Edward Maruska, director of the Cincinnati Zoo; and Jack Hanna, director of the Columbus Zoo.

Again, if you'll each take about 5 minutes, and we'll try to keep to 5 minutes this time because we're momentarily awaiting a rollcall vote, then we'll have some questions for you.

And, of course, your testimony as prepared will be printed in full at this point in the record.

Dr. Bohlen.

STATEMENT OF E.U. CURTIS BOHLEN, VICE PRESIDENT, WORLD WILDLIFE FUND

Mr. BOHLEN. Thank you, Mr. Chairman.

World Wildlife Fund has been involved for 25 years now in helping countries in Africa and Asia protect the rhino. One thing we have learned is that to be really effective we must have public awareness and public pressure.

I'm absolutely delighted that you're holding this hearing to create, as you so eloquently said, a sense of outrage. That's really what we need. We have to get the high level leaders of the world and governments equally outraged and begin to put pressure on some of these countries like Singapore.

Our program in Africa today really focuses on three different courses of action. First is helping countries set up antipoaching patrols in the national parks and second is working with people like Mr. Sindiyo on setting up rhino sanctuaries in those countries where that is the only means of protecting the genetic stock until the trade is ended.

And, lastly, I think the most important efforts that are being made are toward ending the rhino trade. That's been a point well made today by Dr. Martin and others.

I'll get down to the basic point I'd like to make to you because you asked what can our U.S. Government do at this point? I think the single most important thing we can do is to get the Department of the Interior to prohibit all imports of wildlife from Singapore. We have actively urged them for several years to take this course of action. We believe they have ample authority to do so.

In testifying before Senator Chafee's Committee on Environment and Public Works in 1984 we urged this course of action, and they keep saying they're going to do it, but so far we have not seen any results.

It is clear to us, and the Justice Department reaffirms our belief, that this Government has the authority to ban all wildlife imports from Singapore. In our view, Mr. Chairman, that's the only kind of——

Mr. SCHEUER. Excuse me. Do you mean wildlife products or do you mean live wild animals?

Mr. BOHLEN. Both, sir. Both. We have the authority today to stop the imports from Singapore of all wildlife, live wildlife and wildlife products.

Mr. SCHEUER. You think we should prohibit the entire ball of wax?

Mr. BOHLEN. I think that's the only way you're going to get the Singapore Government's attention. As you mentioned earlier, there's a sizable amount of trade in wildlife with Singapore, and I'm sure that would get their attention in a hurry.

To me, this issue has become so serious that we can't afford to wait any longer. We must move ahead and take some drastic action like that.

Mr. SCHEUER. Please continue.

Mr. BOHLEN. Singapore, as has already been pointed out is a significant problem not just for rhino horn, but its markets and shops display a proliferation of live wildlife and items made from endangered protected species. This activity is not illegal in Singapore at the moment because the government has consistently delayed signing CITES, but elsewhere in Asia it is strictly illegal, and much of the wildlife in Singapore's markets was taken illegally in its country of origin.

As a gateway for trade to the Orient, Singapore acts as a funneling point and laundering center for wildlife smuggled out of other countries. By creating demand and facilitating trade, it directly encourages poaching in developing countries that want to protect their own native species. We have to help those other countries by eliminating this funnel through which it all flows.

I think I'll just leave it at that, Mr. Chairman. I think that's the single most important thing at the moment that our Government could do. We should institute that kind of ban. I know the Interior Department has been talking about it, but I've heard them talk about it for a long time. We should institute that ban and not let up on it until Singapore joins CITES and stops the trade in rhino horn.

Mr. SCHEUER. In other words, you think that ban should be a temporary thing?

Mr. BOHLEN. Yes, until they join CITES and live according to internationally accepted standards and provide the proper documentation with their wildlife shipments that will clearly show to our inspectors at the ports of entry whether these are legal shipments or not.

Mr. **Scheuer**. I think that might be something that Congress could do.

Mr. **Bohlen**. We would certainly welcome any help you could——

Mr. **Scheuer**. Well, maybe we'll talk to you about it.

[The prepared statement of Mr. Bohlen follows:]

Statement By
E. U. Curtis Bohlen
Senior Vice President
World Wildlife Fund

Before

The Subcommittee on Natural Resources,
Agricultural Research and Environment

Committee on Science and Technology
House of Representatives

September 25, 1986

Mr. Chairman:

I am Curtis Bohlen, Senior Vice President of World Wildlife Fund, the world's largest, privately funded, conservation organization, dedicated to protecting and maintaining the living natural resources upon which the human race depends. Toward this end we help fund the work of scientists, wildlife specialists and park managers throughout Latin America, Africa and Asia.

I appreciate the invitation to appear before this Subcommittee to discuss the fate of the rhinoceros, an ancient creature that has been pushed to the brink of extinction by the greed of modern man. No other animal in recent times has been so decimated by international trade.

We all realize that the world is losing species at an alarming rate, and that most of this loss is caused by habitat destruction, particularly in tropical forests. But illegal trade is a critical factor in the demise of many species, and the rhino is a classic example of how that trade can quickly imperil a species, even while its habitat remains relatively undisturbed.

As you have heard from earlier witnesses, all populations of rhino, except the southern white, are in imminent danger of extinction, due entirely to market demand for their horns.

The decline of the rhino has been a particularly disappointing and frustrating experience for World Wildlife Fund. In the 25 years since WWF was founded we have spent well over a million dollars to help protect the rhino. One of our very first projects in 1962 helped set up an anti-poaching team in northwest Uganda where a population of northern white rhino had been reduced 50% by poachers. The project was initially successful with no rhinos being poached the following year, but later political disturbances in Uganda led to a total breakdown in law and order and today that population is extinct. Subsequent projects provided help to the Javan rhino and the Sumatran rhino and more recently to India's greater one-horned rhinoceros, but the vast majority of our efforts have been aimed at safeguarding the black rhino in eastern and southern Africa.

Toward this end we have helped establish and maintain national parks throughout the region. We have provided vehicles, radios and ranger equipment to anti-poaching squads in Kenya, Uganda, Tanzania, and Zambia. Yet desite the best efforts of those governments and private conservation groups such as WWF, black rhino populations continue to plummet. Our joint efforts have certainly slowed the process, but it has become increasingly clear that the black rhino cannot survive on the vast expanses of African savannah as long as its horn is worth its weight in gold, as long as there is a market demand for rhino products.

Amidst the gloom there have been some successes, however, enough to demonstrate that conservation efforts can make a difference. In Garamba National Park in Zaire the northern white rhino population had fallen to 14 known survivors when WWF was called in to help the government strengthen the park's management structure and anti-poaching capability. Today that population stands at 17, a small but significant increase. In southern Africa the southern white rhino was down to fewer than 50 individuals in 1910 and has now recovered to some 4,100. That population is no longer considered endangered.

On the basis of past experience, WWF has reoriented its rhino program in recent years. Following the advice of IUCN's African Elephant and Rhino Specialist Group, WWF is pursuing three courses of action simultaneously:

1. We continue to provide support to anti-poaching programs in those key areas where there is a reasonable chance of success, such as Kenya's Masai Mara Reserve, and in those few areas that still have significant rhino populations, such as Tanzania's Selous Game Reserve and Zambia's Luangwa Valley.

2. We encourage the development of national rhino conservation plans, as Kenya has done; and we will help fund selected rhino sanctuaries, such as Kenya's Lake Nakuru National Park, in countries where sanctuaries offer the only realistic hope of preserving genetic stock until the time when international trade is eliminated and rhinos can be restocked in their traditional habitats.

3. We are pursuing all available means to stop the international trade in rhino horn. This program is the real key to the rhino's survival and its eventual rehabilitation.

In furtherance of this last objective, we have funded the successful work of Dr. Esmond Bradley Martin; we have organized an international network of TRAFFIC offices to monitor international wildlife trade, in close cooperation with the secretariat of CITES (the Convention on International Trade in

Endangered Species); and Prince Philip, our international president, has been instrumental in persuading government leaders in several Asian countries to join CITES and ban all trade in rhino horn. He has recently written the prime minister of North Yemen.

The CITES Convention was adopted in Washington in 1973 with the expressed purpose of curtailing trade that threatens the survival of any species. It was a farsighted effort but implementation in some countries has been slowed by the greed of those traders who find incredible profit in illegal trade. Ninety-three nations have become members of CITES since 1973, but in that same time 75% of the world's rhinos have disappeared.

CITES cannot be truly effective until all the major producing countries, the consumer countries and those countries that function as intermediary centers of trade and transshipment have become members. As long as there are holdouts like Singapore the rhino will not be safe.

As one of the world's largest trade centers, Singapore's markets and shops display a proliferation of live wildlife and items made from endangered and protected species. This activity is not illegal in Singapore because the government has consistently delayed signing CITES. But elsewhere it is strictly illegal and much of the wildlife in Singapore's markets was taken illegally in its country of origin.

As a gateway for trade to the Orient, Singapore acts as a funneling point and "laundering" center for wildlife smuggled out of other countries. As Dr. Martin's study has demonstrated, Singapore is both a major consumer of Asian rhino products and the last remaining major entrepot for rhino horn. By creating demand and facilitating trade it directly encourages poaching in developing countries that want to protect their native species.

It is time that world leaders and responsible governments put added pressure on Singapore to join CITES and stop all trade in rhino horn. WWF is mounting a major campaign to that end, but we must have worldwide support from Singapore's principal trading partners, if the pressure is to be effective.

You asked, Mr. Chairman, what action the U.S. can take to help save the rhinos from extinction. In my view, the highest priority is to exert all possible pressure and influence to shut down international trade in rhino horn.

Specifically, in regard to North Yemen, the Department of State should use its good offices and the leverage of our economic aid program, if necessary, to get the Yemeni government to enforce its ban on rhino horn imports and to undertake the other steps that Dr. Martin has recommended. Despite its announced ban North Yemen remains the world's greatest consumer of black rhino horn.

As for Singapore, the State Department should renew its efforts to get the Singapore government to accede to CITES and should encourage Japan and Singapore's other trading partners to make similar diplomatic representations.

I would like to take this opportunity to stress to you, Mr. Chairman, how pleased WWF has been with all that the Department of State has done in support of CITES. It is clear to us and to our TRAFFIC offices around the world that the continuing strong leadership of the United States is critical to the long-term success of CITES.

The U.S. must convince other nations that we are serious about making CITES an effective worldwide instrument for stopping illegal wildlife trade. In cases like Singapore we must use all available authority under our laws to force governments to adhere to the principles of CITES. Only when the results of their recalcitrance cause economic loss that exceeds the profit from illegal trade will we get their attention. World Wildlife Fund has long urged the U.S. Fish and Wildlife Service to exercise the authority of the Lacey Act and ban all imports of wildlife from countries that do not submit export or re-export documentation in conformance with CITES requirements. This action can be applied to nonparty states as well as member states. There is no reason that we should allow a nation's traders to profit from the U.S. market when that nation will not adhere to accepted international standards.

Specifically, our government should immediately ban all imports of wildlife and wildlife products from Singapore until such time as Singapore joins CITES and provides documentation that clearly shows the country of origin of each shipment. Only then can we determine whether a given shipment is legal or whether it violates the laws of the country where the wildlife was taken.

That, Mr. Chairman, would be the greatest single action our government could take at this time to save the rhino from extinction.

Mr. **Scheuer**. OK, Mr. Hanna.

STATEMENT OF JACK HANNA, DIRECTOR, COLUMBUS ZOO, COLUMBUS, OH

Mr. **Hanna**. Mr. Chairman, I was the one person that did bring the rhino horn that you see sitting here. I had a very difficult time getting it on the plane. I don't know how I'm going to hijack a plane with that horn, but that's what they felt. [Laughter.]

But I would love for you after the hearing to pick that up and feel how heavy it is. It's worth about 35,000 U.S. dollars.

Dr. Maruska and I represent about 120 major U.S. zoos which had approximately 125 million visitors last year. You can double professional football, baseball, all of them, and you don't have the visitation you would to a zoological park in this country.

The zoos have chosen about 37 species of animals, endangered animals, over the next 50 to 100 years to see if we can help them survive into the next century and the century after that. The rhino is just one of these species that we're concerned with as zoo directors.

I think most of the directors would agree that the best place for animals obviously is in the wild, but there is no wild left. We're here today to talk about sanctuaries and parks, and in all my travels throughout the world, really the world is becoming just one big sanctuary in the different parks as far as that's concerned.

We do have a famous rhino in Columbus I'll mention because we're very proud of him. His name is Clyde. He's 27 years old. He's the only rhino in the world that we collect semen from on a weekly basis and send it to Ed Maruska's frozen zoo in Cincinnati, which is one of two frozen zoos probably in the world. So this animal is a very important animal——

Mr. **Scheuer**. Excuse me. Will you define "frozen zoo"? Is that the expression?

Mr. **Hanna**. Right. That's the expression we use in the zoo business; right. That's when we're freezing semen from different animals to see what research will be done in years ahead, and he has probably one of the finest research centers in Cincinatti of any zoo in the world. We have the only rhino in the world that we can actually collect semen from while he eats monkey biscuits and stands up, without putting him to sleep. So he's a very famous rhino. So it's very important that we have this rhino.

Mr. **Scheuer**. Well, can I interject a question at this point, and it's probably an embarrassingly stupid question, but let me try anyway.

We have had programs both for humans and for animals where—let's say if a woman is infertile in the case of a human because of flawed fallopian tubes, let us say, where the egg can't get to the point where it has to be to be fertilized. We can take out the egg, we can extract the egg, and we can extract some semen from her husband, and we can fertilize the egg with the husband's semen and plant that fertilized egg in another woman who will be the host of that fertilized egg for 9 months and bear the child. The woman who bears the child is not a natural parent. It is not her biological child. It is the biological offspring of the infertile woman and her husband. So you get a product of—the infant is then a product of the infertile woman and her husband, but it was borne by a host woman for 9 months.

And I presume we've done that routinely in improving cattle herds and all kinds of animals. Why can't we address this kind of technology to the rhino herds, perhaps not the black rhinos where they number in the thousands, but in some of the vanishing species of the five species where there seem to be less than 100, if my memory is correct from the testimony that I've read? Why can't we take the semen and the eggs from existing remnants of those herds in Africa and artificially inseminate either a rhino in a zoo or perhaps—I don't know whether an elephant or some other large animal, a female elephant or other large female animal could accept that fertilized egg of a male and female rhino of a subspecies, one of these five subsets that is nearing extinction and bear that infant rhino.

Couldn't we do that on a large scale with perhaps elephants or rhinos, female rhinos that are in zoos all over the world? Couldn't we rejuvenate rather rapidly through the miracles of modern technology, genetic breeding? Couldn't we do that?

Mr. HANNA. We are attempting to do that if we haven't waited too late. Dr. Maruska will address all that because Cincinnati has done some incredible feats has far as just what you're talking about. He could probably mention that in his testimony.

But I do want to thank you for having us here today because zoos are probably one of the most popular attractions in this country educationally, for conservation, research, as well as entertain and recreation. And on behalf of all the zoos, we want to thank you for having us here.

And I also have to present to you today and the rest of your committee—I was supposed to do this afterward but I will now—this is not necessarily a joke because we've raised $12,000 with the "Save a Horny Friend" T-shirt. So I want to give that to you and the members that did leave——

Mr. SCHEUER. What does it say?

Mr. HANNA. I'll give it to you. Wait a minute. [Laughter.]

Mr. HANNA. You might want to wear this to your tax bill this afternoon.

[Mr. Hanna walks up to Mr. Scheuer and presents him with a "Save a Horny Friend" T-shirt.]

Mr. SCHEUER. Beautiful. "Save a Horny Friend." [Laughter.]

Well, that's wonderful.

Mr. HANNA. I think Dr. Maruska can answer the questions that you were probably asking.

Mr. SCHEUER. I beg your pardon?

Mr. HANNA. Dr. Maruska can answer some of the questions that——

Mr. SCHEUER. All right. Are you finished then, Mr. Hanna?

Mr. HANNA. Yes.

Mr. SCHEUER. Very good. We thank you for your testimony.

[The prepared statement of Mr. Hanna follows:]

Statement of

Jack Hanna

Director, Columbus Zoo

before

The Subcommittee on Natural Resources,

Agriculture Research and Environment

September 25, 1986

PLIGHT OF THE RHINOCEROS

The current status of the rhino population throughout the world is endangered and threatened with extinction in the immediate future. The only form of rhino that appears to be in no immediate danger is the Southern Race of White Rhino. There are currently several thousands being maintained on private ranches and in game preserves. However, the Northern Race of this same species may number less than one dozen at this time, and it could disappear totally at any time. Black Rhino, the other species of African Rhino, while more numerous than the Whites, are disappearing at an alarming rate. Between 1970 and 1980 a full 90% of those in Kenya, Uganda and Northern Tanzania were killed. Since 1980, it is estimated that the total population has decreased by 73%. In Kenya alone the population was 20,000 and is now 350. The total number of Black Rhinos is now fewer than 5,000. Over half of those are found in Tanzania, with the vast majority of the others in Zambia and Zimbabwe. They were once common in many parts of Sub-Saharan Africa.

The major incentive for poaching rhino is the value of rhino parts and their derivatives in certain markets of the world. In traditional Chinese medicine the horn, blood, urine, skin, stomach, bones and internal organs are used as a preventative cure for a wide variety of maladies (fever, earaches, lack of vigor, headaches, constipation, body pain, aging, skin disorders, etc.).

Despite westernization of Oriental Societies and the decline of rhino populations, more rhino horns were apparently traded during the seventies than ever before.

Since the end of the Civil War in Yemen in 1970, the demand for rhino horn to fashion the handles of ceremonial daggers worn by the adult males of the region has made the North Yemen city of Sana'a the largest market in the world for rhino horn. The knives or "jambias" are an important symbol of manhood and those with handles fashioned of rhino horn, composed of compressed fibers of dermal derivation similar to hair, are considered highly desirable as an indication of a man's status. During the seventies, the per capita income in North Yemen increased five fold permitting an increased number of men to purchase the most desirable daggers. At about $95 per kilo for raw rhino horn in the country of origin (as much as $11,000 per kilo in some far eastern markets) it is well worth the limited risk of being caught during the short time it takes an organized group of criminals to dispatch a rhino with high powered rifles and dehorn it, leaving the remainder of the carcass to rot. Avenues of transport, as well as the marketing process are all well organized, visible and often ignored, even by the governments that legislate against them. This can be the result of corruption of law enforcement officials or, in some cases, simply because the officials do not, themselves, consider the offense to be a serious one.

Major markets outside of North Yenan include Singapore, Macao, South Korea, Brunei, Thailand, Indonesia, Malaysia and Japan. China still processes rhino horns into tablets which it exports in bulk into many of the centers of population in Southeast Asia.

Current efforts to protect rhinos are taking a variety of forms. The creation of reserves, some on privately owned ranches, where the animals can be relocated, protected, and managed closely seem to have worked well thus far in the case of the Southern Race of the White Rhino. This is also being done with Black Rhinos, but with somewhat more difficulty. The White Rhino is a herd animal of open plains, lending itself to being kept in relatively large groups on open pasture where they can be easily monitored. Black Rhinos, on the other hand, are solitary creatures inhabiting bush country that is not so easy to patrol. Once these areas are established, fenced, and staffed it can cost up to $9,000 per month to maintain and protect a 5,000 acre tract.

There may be as many as 1,000 great Indian Rhinos living in protected reserves with a temporarily stable population. The populations of Javari and Sumatran Rhinos appear to be a few dozen and declining. Recently, however poaching of Indian Rhinos has occurred with the apparent collusion of reserve employees.

Public education efforts aimed at the governments and residents of the areas where the animals are located, as well as at governments and people where the products are consumed, have been initiated. Enactment of laws to dissuade dealers is occurring. Although many such laws are ineffective, it is hoped that education efforts, as well as pressures through conservation organizations, will increase their effectiveness. Zoos and other interested parties are working on captive propagation programs to "bank" a certain number of specimens in a variety of widely dispersed and relatively safe locations throughout the world.

Further action must be taken immediately. Further reproductive and behavioral studies need to be initiated and funded to determine what requirements (enviromental, social and nutritional) are needed to maintain a viable population. All individual animals outside of protected reserves and ranches may need to be relocated to existing and/or newly created protected sites. These areas need fenced boundaries and highly motivated, well equipped, well trained, game protectors willing to literally go to war with the highly motivated, well equipped, organized poaching units. Every individual rhino should be considered irreplaceable and physically protected as though it is the last of it's kind.

Long term efforts should include continued educational programs to deter the use of animal products, as well as to instill in the local people the rhino's importance to the tourist trade and the wastefulness of killing them for use by someone in another part of the world.

Furthermore, whatever possible should be done to encourage other governments to enact and enforce legislation to protect existing rhino populations and deter trade in rhino products. Every opportunity to bring this to the forefront of any dialogue involving the U.S. and those countries should not be missed.

All information gathered regarding rhino species should continue to be collected, analyzed and dissemenated through organizations such as IUCN and WWF.

The best methods to curb the market for rhino products need to be sought out. Whether to find other animal products to act as substitutes or to flood it with legally obtained rhino products, the plight of the rhino is an unusual one. It is not being killed for food, nor being starved on a large scale due to habitat destruction. It is not seriously conflicting with man by competing for land, destroying crops or killing citizens. It is not being sport hunted out of existence or being collected in large numbers for public display in zoos and private collections. It is being poached, in large part for a small lump of skin to be powdered or carved to satisfy someone's superstitious beliefs or to soothe their pride. The desirability of the product arises from deeply rooted cultural and sometimes religious beliefs.

One of our greatest challenges is to truly understand these motivational forces so that we can more effectively deal with them. Utilization of this approach will certainly be advantageous when dealing with future worldwide conservation tissues.

Zoos must assume an aggressive role in the conservation of the present population of rhinos. At this time, recruitment rate (i.e. percentage of live births surviving) in zoo rhinos is lower than the mortality rate. Intense efforts must be initiated to stabilize the zoo rhino population. These efforts must include effective research on rhino reproduction and nutrition, widescale commitment in establishing and maintaining a long-term genetically sound co-operative breeding program among all zoos holding rhinos, and intense efforts to fully develop the potential for cryogenic preservation of reproductive issues. The establishment of genetic exchange between zoos and preserves (possibly by translocating animals, but more probably in the form of frozen ova, sperm, or embryos) should be a top priority of the near future.

The plight of the rhinoceros exemplifies what can happen in a few decades to an animal form that was spread over two continents in fairly large numbers. How large a range, how large a population, is enough to safeguard against extinction when economic and cultural motivations are strongly bent toward its destruction? Rhinos have existed on this planet for over

60 million years. The largest land dwelling mammal that has ever lived was a form of rhino and, currently, the White Rhino is surpassed only by elephants in size.

But, over the next two decades, rhinos and possibly 50% of the earth's land vertebrates, may be driven to extinction by human activity. The danger to all of the planet's life forms is shocking and real. The destruction of the world's vertebrate species will be accompanied by the destruction of most of the earth's plant and lower animal species; life forms not as large or emotionally appealing as rhinos, but vital parts of the world's ecosystems. The real challenge of the next century is to preserve the living heritage of our world by all possible means and to attempt to stabilize the human population before the human species joins other large vertebrates on the road to extinction.

January, 1986

Black Rhinoceros (Living) in North America

Institution	Animals	(M)	(F)
Atlanta Zoo	1.1	(20 yrs.)	(24 yrs.)
Brookfield Zoo	1.3	(7 yrs.)	(<1, 15, 16 yrs.)
Busch Gardens	0.2		(2, 17 yrs.)
Cheyenne Mountain	1.1	(4 yrs.)	(13 yrs.)
Cincinnati Zoo	3.3	(<1, 15, 29 yrs.)	(<1, 14, 15 yrs.)
Columbus Zoo	1.1	(34 yrs.)	(11 yrs.)
Dallas Zoo	1.1	(32 yrs.)	(30 yrs.)
Denver Zoo	2.2	(2, 13 yrs.)	(3, 14 yrs.)
Detroit Zoo	1.1	(6 yrs.)	(24 yrs.)
Garden City, Kansas Zoo	1.1	(26 yrs.)	(26 yrs.)
Kansas City, Missouri Zoo	0.1		(3 yrs.)
Lincoln Park Zoo	1.2	(4 yrs.)	(3, 4 yrs.)
Los Angeles Zoo	2.5	(7, 11 yrs.)	(<1, 2, 8, 9, 22 yrs.)
Metro Miami Zoo	2.2	(8, 21 yrs.)	(14, 16 yrs.)
Oklahoma City Zoo	1.1	(23 yrs.)	(22 yrs.)
San Antonio Zoo	1.1	(15 yrs.)	(16 yrs.)
San Diego Zoo	1.1	(18 yrs.)	(15 yrs.)
San Diego WAP	2.1	(5, 6 yrs.)	(9 yrs.)
San Francisco Zoo	1.2	(31 yrs.)	(<1, 14 yrs.)
Sedgwick County Zoo	1.1	(5 yrs.)	(13 yrs.)
St. Louis Zoo	2.2	(<1, 11 yrs.)	(10, 24 yrs.)
Bentsen Ranch, Texas	1.1	(13 yrs.)	(16 yrs.)
CANADA-Granby Zoo	1.1	(23 yrs.)	(15 yrs.)
	28.37		
Total:	65 animals		

1753-5-2-0

STATEMENT OF EDWARD MARUSKA, DIRECTOR, CINCINNATI ZOO, CINCINNATI, OH

Mr. MARUSKA. Mr. Chairman——

Mr. SCHEUER. Is your——

Mr. MARUSKA. Oh, now it is [referring to his microphone being turned on]. Thank you.

The Cincinnati Zoo has the dubious distinction of recognizing and realizing the extinction of two endemic species, the last of which died at the Cincinnati Zoo. Martha was the passenger pigeon whose remains are here at the Smithsonian Musuem of Natural History. She died at the Cincinnati Zoo in 1914—one of the most abundant of all land birds, and the last of her species died in our institution.

The second was followed by our only endemic species of parrot, the Carolina parakeet, the last of that species. Although Martha did have a lot of acclaim, the passage of—the Carolina parakeet died rather quietly because it was overshadowed by World War I. But Inca a male, died in our zoo in 1918. We have vowed never to let that happen again.

And I believe I can speak for all zoos. The mission of all zoos, all modern zoos, has expanded to include the propagation of endangered species, and we can play an important role in the preservation of all the species of rhinoceros.

This does not mean we want to be repositories, but we're forced into that position by situations that are occurring in the wild.

We incur strong emphasis in matters on preservation of animals in the wilderness and habitat preservation. In fact, all our education programs are geared toward that.

The Cincinnati Zoo has bred more black rhino than any zoo in the world. By the way, the first black rhinoceros born in captivity was born at the Brookfield Zoo just outside of Chicago in 1955. Since 1959, the Cincinnati Zoo has bred 13 black rhino. But in that period of time the black rhino has diminished in the wild by 97 percent.

Because we believe in the species' innate right to exist and in its esthetic and ecological contribution to the Earth's diversity, and we are actively involved to save it from extinction, we applaud your committee for taking an interest in this interesting pachyderm.

The situation in the wild, obviously poaching is continuing, and although poaching has been done mostly in outlying areas, even in the reserves serious tolls have been taken.

Zoos may provide the most positive outlook for black rhinos because they are absolutely safe sanctuaries where rhinos tend to do well and to breed successfully. Zoos certainly today are approaching the challenge of captive management of endangered species through the American Association of Zoological Parks and Aquariums' Species Survival Plan.

Recognizing certainly that we could not take care of all species or manage all species, we selected certain target animals, animals that are severely endangered in the wild. By information, that's been gleaned from International Union of Conservation of Nature or other field studies. So we've selected 37 animal species that we think we can manage. We have the personnel, the animals are available, and we have the necessary expertise to do so.

From populations of a minimum of 50 animals, careful, selective management by our geneticists demonstrates that we can maintain these animals for as long as 200 years. Ideally, we'd like to have a population of 250 per species. This would be ideal to prevent inbreeding and, hopefully, without a loss of genetic variability.

The three basic criteria are very essentially a breeding nucleus species has to be available; the species' subspecies' continued existence in the wild must be to some degree imperiled; and there must be available an organized group of captive propagation professionals with sufficient support to carry the species or subspecies program to captive preservation status.

Certainly all rhinos meet these criteria. We're now managing the Indian, the white, and the black, with hopes of obtaining later at some date the Sumatran.

Each species is managed by a propagation group consisting of the member institutions and are led by a coordinator, and I am the coordinator for the black rhinoceros in the States.

Through improved animal management, including the exchange of animals between zoos on breeding loans, we have already achieved a higher survival rate among the captive-born rhinos. Obviously no single zoo can afford to manage a species or has the expertise or even the finances to do so, but collectively we can manage these animals quite well.

To cite an example, the captive population today currently numbers 64 black rhinos. We'd like to bring that population up to 100 animals. We have 210 whites and 28 Indians, and all are on the increase.

Mr. **Scheuer**. And where are they located?

Mr. **Maruska**. They're located in zoos throughout the United States. It would be difficult for me just offhand to give you, but——

Mr. **Scheuer**. But you know where they are?

Mr. **Maruska**. Oh, yes.

Mr. **Scheuer**. The overall master plan?

Mr. **Maruska**. Exactly. Michael Dee of the Los Angeles Zoo is the coordinator for the Indian rhino; Robert Reece of Kings Island Wild Animal Habitat is the coordinator for the white rhino. And we do have a management program.

For example, Jack just handed me a program. The institutions participating in the black rhino are Atlanta; Brookfield; Busch Gardens in Miami; Cheyenne Mountain in Colorado; Cincinnati; Columbus; Dallas; Denver; Detroit; Garden City, KS; Kansas City, MO; Lincoln Park; Los Angeles; Miami; Oklahoma; San Antonio; San Diego; San Diego Wild Animal Park; San Francisco; Sedgwick County; St. Louis; Bensen Animal Ranch in Texas—with a total of 65 animals.

Mr. **Scheuer**. That's very impressive.

Mr. **Maruska**. The important next step will be——

Mr. **Scheuer**. Let me ask this——

Mr. **Maruska**. Yes.

Mr. **Scheuer**. You must have mentioned 20 or 25 institutions, I would think.

Mr. **Maruska**. Yes.

Mr. **Scheuer**. Why do you only have 65 animals? If each one of them were working in this direction, wouldn't you have more than one or two?

Mr. **Maruska**. Well, the emphasis—the program, the SSP program was instituted in 1980, relatively recently. And it was——

Mr. **Scheuer**. It would seem to me if you have, let's say, 20 institutions that you just read off—it seems to me if you have 20 institutions with professional, dedicated leaders like yourself, the challenge of going from 65 to 100 would be rather, I would think, easily doable.

Mr. **Maruska**. Well, one of the problems, of course, is space. Black rhinos, unlike the white—the white is a gregarious animal; it can be managed in large numbers. Blacks are solitary animals, relatively solitary animals in the wild. They maintain a relatively large territory and only come together during breeding periods. It is often difficult to even maintain a male and female together for any period of time, only during the time of estrus or when the animal is cycling.

So obviously zoo situations are ideal because you can keep pairs of animals rather than large numbers. The ranch situation would be more ideal. If we can now move some of the white rhinos into ranch areas—we're getting some of the ranchers interested in New Mexico and Texas—into our programs, thereby freeing up more zoo spaces for blacks, we can increase that population considerably.

Mr. **Hanna**. Mr. Chairman, what I didn't mention was that every zoo in the United States could fit into the borough of Manhattan. That's all the room we have. Every single zoo in this country would fit in——

Mr. **Maruska**. The city of Cincinnati.

Mr. **Hanna**. The city of Cincinnati.

Mr. **Scheuer**. Are there any habitats—I asked this question from one of the beginning panels who referred me to you—are there any wildlife habitats in the United States like Okeechobee swamp in Florida, like the swamps in Mississippi near Biloxi that would be appropriate to take perhaps hundreds or thousands of acres where the Federal Government could come in and condemn this land, or maybe where they're in national park use already but not serving any particular purpose other than lying fallow as national parks? Are there any such areas that either could be converted to this kind of use if they're in national parks now or they could be acquired by a national park and administered for this use?

Mr. **Maruska**. I think that in itself might a difficult solution because of the disposition of these animals, No. 1. The areas would have to be fenced off pretty carefully and guarded.

I think rather we're relying on private individuals that have a great deal of wealth and have large sections of land that have become interested in the problems. Right now we're in negotiations with Mr. William Gruenerwald from New Mexico. Mr. Gruenerwald is a wealthy oil man. He's acquired a lot of property. He maintains a lot of property where he keeps other wild equid species. He's developed a particular love for rhinos. And he's going to acquire a very large tract of land in New Mexico and he's going to help us develop that using his funds. We will manage it. And he's committing himself to long term.

The problem I see in reserves——

Mr. **Scheuer**. Who is this that you're referring——

Mr. **Maruska**. Mr. William Gruenerwald. He's from Colorado but he owns some property in New Mexico.

Mr. **Scheuer**. That's marvelous. That's very encouraging.

Mr. **Maruska**. He owns a Colorado equid sanctuary right now where he's maintaining, I think, 700 or 800 hundred head of endangered equids.

The problem I see with reserves other than Government reserves is short term. We've got to think in long term. This is where personally I would prefer supporting the Government of Kenya rather than private interests because I think that is where we're going to get the long-term investment in these animals.

Because you may have an interested party that sets up a reserve and if that party dies, unless there's some long-term commitment made, the project is lost. So we've got to either encourage more Government participation in helping those governments set up these sanctuaries or, if they are private individuals, they in turn must commit to the Government in time after their death for long-term use of these areas. Otherwise I think we're fighting a losing battle.

Mr. **Hanna**. And making sure the money gets to the rhino in some of these countries, by the way.

Mr. **Maruska**. Yes.

Just to give you some examples, the cost of captive rhino management may run $8,000 per year per animal. In the Optimum Captive Management Program providing for 250 of these species the cost would be some $2 million per year per species. These costs can be absorbed in part by the American public, which has made zoos and aquariums, as Jack pointed out, the most popular attraction in the Americas.

But certainly we encourage the Federal Government to continue its support of our work, the continued funding of the Institute of Museum Service and other Federal programs of which many zoos are beneficiaries.

Comparing the millions required for captive propagation to the estimated 75,000 to 100,000 per year required to maintain an entire wild sanctuary, it is obviously more cost effective, more efficient to propagate rhinos in the wild. The zoos can provide the necessary failsafe against extinction, especially given the improved methods that have been developed to make our efforts more fruitful.

[The prepared statement of Mr. Maruska follows:]

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CINCINNATI ZOO

Presentation to

U.S. House of Representatives

Committee on Science and Technology

Subcommittee on Natural Resources,

Agriculture Research and Environment

Submitted by:

Edward J. Maruska

Executive Director, Cincinnati Zoo

September 25, 1986

INTRODUCTION

The Cincinnati Zoo has the dubious distinction of being the place where "Martha", the last of the passenger pigeons died in 1914. Having witnessed extinction, our zoo has tried to be more than a place where animals live, then die.

The mission of all zoos has expanded to include the propagation of endangered species and we can play an important role in saving the rhinoceros from extinction. This does not mean that we want to be repositories for vanished animals, but we have been forced into that position by circumstances in the wild. We encourage strong emphasis on measures that will preserve wild rhinos and their habitats as well as make them available for zoo-goers to enjoy.

The Cincinnati Zoo has bred more captive black rhinos than any other zoo. Even so, our two pairs have produced only 13 babies since 1959. During that same time, wild black rhinos have diminished by 97 percent. The Cincinnati Zoo currently owns 8 black rhinos -- more than are probably left in the Ngoro Goro Crater Conservation Area in Tanzania.

Because we believe in this species' innate right to exist, and in its aesthetic and ecological contribution to the Earth's diversity, we are actively involved in the effort to save it from extinction. We applaud Mr. Scheuer and the Sub Committee on Natural Resources, Agriculture Research and Environment for taking an interest in this spirited pachyderm.

BACKGROUND

Rhinos have been part of the world scene since prehistoric times. There were once 170 species, the largest of which, Baluchitherium, stood as high as 18 feet at the shoulders and was probably 27 feet long -- five feet of that being its head! Like modern rhinos, these ancient giants were herbivorous and posed little threat to animals around them. They were found in all kinds of habitats in North America, Europe, Asia and Africa and were the dominant animals of their time.

Successive glaciation. climatic changes and, possibly, hunting by early man, led to the extinction of all but five species that we know today: the Indian, or "One-horned" rhinoceros (Rhinoceros unicornis); Javan rhinoceros (R. sondaicus); Sumatran, or "Hairy" rhinoceros (Didermocerus sumatrensis); White rhinoceros (with two significant subspecies populations the Southern White, Ceratotherium simum simum and the Northern White, C. s. cottoni); and Black rhinoceros (Diceros bicornis) which species I am most involved with. These weigh an average of 3000 lbs. and stand approximately 5 feet high by 11 feet long. At top speed they can run 35 miles per hour.

All rhinos share similar habits. They tend to stay in one area, beating well-worn paths or tunnels through the brush to reach water. Rhinos generally live alone except during mating or when raising their young. Only the white rhinos live in small herds.

Were hunting and poaching not factors, rhinos could live up to 50 years. Gestation lasts 15 to 16 months. Births are predominantly single.

All but the Indian and Javan rhinos have two horns projecting forward from the upper part of their nose. These are not true horns which grow directly out of bone. Rather, they are formed of glutinated hair held together by a cementing substance. The horn sets on a roughened mound on the skull and is held in place by skin. If the horn of a living rhinoceros is lost, and the underlying tissue is not damages, it will regenerate.

This feature, which accounts for only 1/300th of the rhino's total weight, is the cause of its rampant destruction.

1. WHAT IS THE CURRENT STATUS AND PROGNOSIS FOR THE WORLD'S RHINOCEROSES?

All of the world's five rhinoceros species are in decline. To summarize:

The Indian rhinoceros population has shrunk to about 1,700 animals.

The Sumatran rhino, widely dispersed in fragmented populations in the forests of Burma, Indonesia, Thailand, Malaysia and possibly Kampuchia, Laos and Vietnam, numbers only about 500. (One of the oldest mammalian genera, the Sumatran rhino has survived relatively unchanged since the Oligocene period 30 million years ago. Compare this to man's reign on Earth of some two million years.)

The Javan rhino population, comprising fewer than 65 specimens living in the Ujung Kulon Park, a reserve set aside specifically for it on the west side of the island, is one of the world's rarest animals.

The Southern white rhinoceros subspecies represents one of the great conservation success stories of our time. This species reached a low of less than 50 animals in 1897 when the Umfolozi Reserve and other areas were created to protect it. In 1953, 437 white rhinos on the reserve became threatened by poaching and squatting by the increasing Zulu population surrounding the reserve.

By responding with vigorous anti-poaching activities and good game management, the government of South Africa and its wildlife managers have supplied large herds of white rhinos to zoos throughout the world and have increased the wild population to a growing 3000 animals on numerous preserves.

In contrast the Northern white rhinoceros subspecies once numerous from southern Sudan westward to south eastern Chad, and the Central African Republic are disappearing. The Northern white rhino has declined from 1000 animals in 1960 to 18 animals today, all of which are found in Garamba National Park, Kenya.

Black rhinos numbered in the hundreds of thousands less than a century ago. Today, there may be fewer than 3000 remaining with four of seven subspecies of black rhino nearly extinct.

Most astounding is the rapidity with which this animal is disappearing. In 1970, there were a total of 65,000 black rhinos in Africa ranging from just south of the Sahara all the way to South Africa. Kenya alone lost 90 percent of its animals between 1970 and 1980 with the Kenyan rhino population dropping from 20,000 to 1,500. Today, this population might not be more than 200.

In 1981, Dr. Kes Hillman-Smith, a wildlife biologist working in the Garamba National Park in Kenya estimated the total black rhino population to be between 14 and 15,000 animals spread over 18 countries. A 40% decline over four years brought the number to 8-9,000. By 1985 a further 40% reduction left only 5000. The decline in estimates of black rhinos results partly from revised estimates of previously little known populations, but predominantly from poaching losses.

The prognosis for the black rhinoceros looks particularly bleak when one considers that no single population of black rhinos now has more than 500 animals; some have fewer than 30 animals. Range fragmentation leaves many rhinos isolated in pockets with no possibility of gene flow from one population to another. This means that even if all poaching were ceased immediately, these animals could not survive without assiduous game management which will require the support of many governments, park rangers and zoos world wide.

2. WHAT ARE THE MAJOR INCENTIVES FOR RHINO POACHING, AND WHO ARE THE MAJOR OFFENDERS?

There is only one incentive for poaching of rhinoceros; economic.

The trend in the Middle Eastern and Asian countries where the demand for rhino products is the greatest is toward greater per capita wealth. Concurrently, the trend in central Africa which supplies the trade, has been toward abject poverty. If an African kills a rhino, he can live for a year or two with the $3 - 400 he makes from the sale of a six pound horn.

Rhinoceros products have long been believed to have magical or medicinal properties. In Zulu medicine rhinoceros horn is burned to chase away evil spirits, or mixed with dried lice to treat jaundice. In Asia, a variety of medicines are concocted from rhino horn and hide. In India, powdered horn is used as an aphrodisiac. These markets account for just under half the world consumption of rhino horn.

In North Yemen, more the 50 percent of the world supply of rhinoceros horns is used to create ceremonial daggers called jambiyya. These symbols of wealth and manhood sell for $400 to $1000, with some gilded and jewel-studded versions worth up to $20,000. At these prices, ownership of jambiyya is the prerogative of the very rich -- at one time a very small elite.

In 1970, civil war resulted in the overthrow of an autocratic regime that had kept most Yemeni oppressed and poor. With a new government came freedom to seek opportunity outside North Yemen in the Saudi Arabian oil fields. Previously poor Yemeni obtained lucrative jobs and the newly rich began to acquire the traditional status symbols of the rich -- jambiyya.

A 1500 percent increase in the wholesale price of rhino horn between 1974 and 1979 is attributed to the influx of oil money into North Yemen. Roughly three tone were imported by North Yemen between 1972 and 1978. Total world market consumption during that time was 7.75 tons.

Contrary to some contemporary reports, the demand for daggers is on the up surge. The population of North Yemen increases by 2.7 percent per year and by the age of 12 most Yemeni boys own a jambiyya. In addition, 24,000 Western tourists visit North Yemen annually, many of whom are attracted to these traditional souvenirs.

A 2000 percent increase in demand for rhino horn combined with a declining wild rhinoceros population has driven prices to staggering levels. The horn wholesales for approximately $320/lb. in Khartoum. In Manila or Singapore rhino horn retails for $5,000/lb and in Mandalay as high as $9,000/lb. Even the shavings which are a by-product of horn carving are carefully collected and sold for around $30/lb.

The penalties for poaching remain light while the gains are great. Because of the present demand for rhinoceros horn and skin, and high prices being paid for them, present conservation methods are not adequate to insure a future for rhinos outside zoos and a few isolated preserves.

3. WHAT ACTIONS ARE CURRENTLY BEING TAKEN TO PROTECT RHINOCEROSES, HOW EFFECTIVE ARE THEY, AND HOW MUCH DO THEY COST?

Attempts are being made to protect rhinos in three ways: through laws prohibiting rhino horn imports; through protection of rhinos in parks and game preserves; and through captive management in zoos. The effectiveness of these measures is minimal.

In 1982, under pressure from conservationists, the government of North Yemen prohibited the import of rhino horn. Yet law enforcement is lax and under-financed allowing continued increases in demand for rhinoceros products.

In the wild, poaching has eliminated a large proportion of rhinos outside protected areas but the toll has also been heavy in preserves. This is particularly true where law and order have broken down. In Uganda, for example, the same civil war which resulted in the overthrow of Idi Amin, also provided poachers with modern guns, ammunition and transportation, leaving poachers more numerous and better equipped than game wardens.

Anti-poaching patrols are desperately under-staffed, under-equipped and under-financed. The Selous Game Preserve is a park the size of Switzerland patrolled by five Land Rovers; and funded enough for only two patrol nights per ranger per year.

Industrial development in the Selous has also served the needs of poachers. In 1981, a major oil company was allowed to begin prospecting for oil in the Preserve. Rapidly, the once wild territory became criss-crossed with roads, making poaching much easier both by vehicle and on foot. It is no coincidence that since 1981, the rhino population in the Selous -- once the largest single population of black rhinos in Tanzania numbering 3000 -- has been all but exterminated. These problems are typical of those faced by wild game managers today.

Zoos may provide the most positive outlook for black rhinos because they are absolutely safe sanctuaries where rhinos tend to do well and to breed successfully. Zoos now approach the challenge of captive management of endangered species through the American Association of Zoological Parks and Aquariums (AAZPA) Species Survival Plan (SSP) a program that first came under discussion during my term as president of the AAZPA in 1978 and 1979; and that was officially begun in 1980.

The goal of our Species Survival Plans is to maximize the potential of captive management by coordinating the breeding programs of all institutions that house important species. From populations of a minimum 50 animals, we can maintain a healthy breeding population for up to 200 years. Loss of genetic variability (inbreeding) can be minimized when animals are collectively managed under a species specific SSP program. The AAZPA/SSP employs three basic criteria for species inclusion:

1. A breeding nucleus of species or subspecies must be available for captive management.

2. The species' or subspecies' continued existence in the wild must be in some degree of peril as defined by the International Union for the COnservation of Nature and Natural Resources, the U.S. Fish and Wildlife Service or reliable field reports.

3. There must be available an organized group of captive propagation professionals with sufficient support to carry the species or subspecies program to captive preservation status.

Certainly all the rhinoceros meets these criteria and the Indian, Sumatran, Black and White Rhinos are currently designated as SSP animals.

Each SSP species is managed by a propagation group consisting of member institutions that have a signed commitment to the SSP program and numerous captive propagation professionals. They are led by a coordinator for that species. I serve as coordinator for the black rhino. Other rhino species coordinators are Robert Reese of Kings Island Wild Animal Habitat in Cincinnati for the white rhino; Michael Dee of the Los Angeles Zoo for the Indian rhino and Dr. Warren Thomas for the Sumatran rhino.

Through improved animal management, including the exchange of animals between zoos on breeding loans, we have already achieved a higher survival rate among captive-born rhinos. For the first time ever in 1985 the black rhinoceros birth rate in zoos exceeded the death rate. Captive populations currently number 64 black rhinos, 210 white rhinos, approximately 9 Sumatran and 28 Indian rhinos.

An important next step will be to increase the number of rhinos in our captive population so that SSP programs will work. Supplying animals to zoos was a key facet of the management plan that brought back the white rhino and should apply to all future rhino planning.

To do this will involve not only cooperation but coordination of all the individuals, agencies and governments who work with rhinos.

Recognizing the dire situation that has occurred in the wild rhino populations, and the severity and rapidity of the rhino's decline, the AAZPA's Conservation Coordinator, Dr. Tom Foose; Robert Reese, as Species Coordinator for the white rhino and I, as Species Coordinator for the black rhino have called an emergency meeting of field scientists, medical and veterinary researchers, geneticists, population demographers and zoologists. We will assemble in Cincinnati for several days of intense discussion and planning for rhinoceros survival.

We should come away from this workshop with a more meaningful working relationship shared by all parties, as well as better concepts on small population dynamics that now influence field work as much as zoo work. We will gain insights into diseases that afflict the rhino -- specifically, hemolytic anemia. We will improve our reproductive strategies utilizing the direct input of field biologists and geneticists.

Discussion regarding the validity of subspecies designations will have a profound impact on the scale and cost of rhinoceros survival planning since it is always our goal to maintain the integrity of valid species and not to create hybrids. For the black rhinoceros alone, there are seven designated subspecies. These designations may, or may not, have validity since they were based on observed characteristics of live animals or skeletons, or on geographic criteria. Modern morphometric and biochemical investigation may well change this significantly.

If all seven black rhino subspecies prove valid, we will need to maintain 350 animals (50 of each subspecies) to meet the goals of our SSP plan. If fewer of these designations are valid, fewer animals will need to be maintained. Even so, in North America there is space for a total of about 4-500 rhinos and so difficult decisions will need to be made regarding which species and sub species are to benefit from captive management.

The costs of captive rhinoceros management run approximately $8000 per year per animal. In the optimum captive management program, providing for 250 of each species, the cost would be $2 million per year per species. These costs can be absorbed in part by the American public which has made zoos and aquariums the most popular attractions in America. (More Americans 125 million, attend zoos and aquariums each year than attend all professional baseball and football games in a year.) But we urge the federal government to continue its support of our work through continued funding of the Institute of Museum Services and other federal programs of which many zoos are beneficiaries.

Comparing these millions to the estimated $75,000 to $100,000 per year required to maintain an entire wild sanctuary, it is obviously more cost effective and more efficient to propagate rhinos in the wild. But zoos provide a necessary fail safe against extinction, especially given the improved methods that have been developed to make our efforts more fruitful.

4. IS FURTHER ACTION NEEDED TO PREVENT EXTINCTION? IF SO, WHAT ACTIONS DO YOU RECOMMEND?

A prerequisite to building the captive rhino population must be to halt rhino poaching and illicit trade. This can be done by tracking down middlemem and apprehending poachers, managing wild rhinoceros populations wisely, and educating the Asian and African publics in the value of their wildlife assets. The United States government and American corporations should conduct their affairs in such a way as to respond to conservation issues and to financially support conservation efforts.

Specific areas in which the U.S. government can be of assistance are:

a. Create disincentives for the governments of North Yemen, the United Arab Emirates, Brunei, Burundi, Macao, Singapore, Taiwan, China, who currently allow importation of rhinoceros products or ignore existing bans on rhino imports.

b. Actively support anti-poaching activities by providing equipment and supplies including vehicles, spare parts, fuel, radio communications equipment, fencing materials, tents, uniforms, boots and funding.

Esmond Martin included an interesting statement by wildlife expert Ian Parker in a recent National Geographic article. Mr. Parker says, "Conservation today is attempted through the barrel of a gun. We rely on paramilitary forces equipped with all the gadgetry of modern warfare." Although not ideal, the effectiveness of this approach can be seen in South Africa where a thriving rhinoceros population has been restored, and at Chitwan National Park in Nepal where there has not been a case of poaching in 10 years.

Mr. Parker want on to say that, when people do not support it, "conservation is a source of tension, a matter of ethics and priorities at odds. Where citizens support conservation it can succeed." In light of this statement a third recommendation would be to:

c. Educate to eradicate mistaken beliefs about medicinal, magical or aphrodisiac properties of rhinoceros products. In fact, partaking of rhinoceros products is no more effective than biting your fingernails. It may be worthwhile to find or develop a substitute for rhinoceros horn.

d. We must give the financial and moral support of the developed world as a conservation strategy. As we eliminate the demand for, thus the profitability of, rhinoceros products, we must promote economic growth in African nations so that other lucrative occupations might supplant poaching. It will do little good to educate the peoples of Africa or Asia in the value of their natural national treasures if they are not amply rewarded for preserving them.

5. WHAT DOES THE PLIGHT OF THE RHINOCEROS TELL US ABOUT THE POTENTIAL FOR CONSERVATION OF OTHER ENDANGERED SPECIES?

Rhinos, as with other species, compete with man for living space. As human populations increase, along with our insatiable demand for natural resources, there is less room for wildlife.

If we cannot act to save the rhinoceros, whose imposing bulk makes him impossible to ignore, then we have little hope for the 15 percent to 20 percent of ALL species that biologists say will disappear before the year 2000.

Similar measures should be enacted immediately on behalf of the African Elephant, whose tusks fuel the ivory trade; and to save the Earth's primate and feline species, all of which are endangered due to fur trade and habitat loss.

As vital, will be the creation of incentives to save tropical rain forests which control climate and atmospheric conditions worldwide while they house 50 percent to 60 percent of the world's species of flora and fauna.

Rhinos -- lumbering remnants of pre history, caught in a complex web of folklore, society, politics and economics -- can help guide us into a future in which our decision making is infused with an environmental outlook.

- end -

Mr. **Scheuer**. Well, that's really quite fascinating. It has been an extremely interesting panel.

What efforts are being made in the United States to increase knowledge out there in the public about these efforts to save the rhino, these conservation efforts?

Mr. **Maruska**. Zoos are beginning to look beyond their own boundaries. For example, we're recognizing the rapidity of the decline of the African rhino populations. The SSP panel for the white rhino and the black rhino, both chairmen and over scientific coordinator organized a meeting of urgency that will be hosted by Cincinnati and Kings Island Wild Animal Habitat in Ohio, Cincinnati, OH, and we will be encouraging field scientists, university people, and zoologists and zoo people to gather for a 3-day meeting which will occur on October 25–28, and in this meeting we hope to be able to discuss—because of these fragmented populations in the wild, they are going to be dealing with some of the same problems we're dealing with in zoos—inbreeding, the fact that they're going to have move animals around. So it should be an enlightening meeting. And, hopefully, out of all of this will come a meaningful program that will help in the conservation of both the white and the black.

Mr. **Hanna**. Also, Mr. Chairman, tomorrow morning on "Good Morning, America" between 7 and 8 o'clock they will be having a segment on this hearing today as well as discussing the rhino at both Ed's and my zoo. So that will hopefully alert the public to the problem again.

Mr. **Maruska**. The zoo community raised $40,000 to bring over some of the people from the developing nations that certainly couldn't afford to come to attend this meeting, and we've got good representation and I think we're going to have some very interesting outcomes through these meetings.

Mr. **Scheuer**. Well, it's very encouraging to us to end this hearing with a little bit of a lift. The situation isn't entirely bleak.

Mr. Hanna, you just came back from China. Tell us something about how the Chinese Government perceives this problem, what you think they're likely to do about it, what would be the best approach.

This subcommittee is going to China, about 12 Congressmen, in November.

Mr. **Hanna**. Take some powdered soup. [Laughter.]

No, just kidding.

Mr. **Scheuer**. Some powdered soup?

Mr. **Hanna**. Yes, sir. I lost about 12 pounds. [Laughter.]

Mr. **Scheuer**. I've been in China several times before and I thrived on their food.

Mr. **Hanna**. We went to different places.

Mr. **Scheuer**. Yes, I'm proof that you can transplant the human species over vast areas. I would do very well transplanted in China because I love the habitat and I love the food.

They still apparently produce medicine from rhino products? Is that right?

Mr. **Hanna**. Right. Dr. Martin knows more about it than I do, but the one thing we're finding is still—that was alluded to earlier—and that is educating not only the poacher—you know, you have a person in Africa—Mr. Sandiyo knows this—or a poacher; you can't really sometimes blame the poacher when he's feeding his family. He can get $200 or $300 for a horn like that but the horn ends up selling for $30,000. It's like cocaine or marijuana, or whatever else, I guess. It's the top person that has to be stopped.

In China it might be the same thing as far as what one of the Congressmen said up there about the religious value of these dagger handles. I'm sure Dr. Martin knows more about that.

There's got to be a process of teaching these people—for example, in Kenya if they lose their wildlife, that's the second largest industry—I think I'm correct—is tourism in Kenya. So if the people are taught that they'll lose their second largest industry, then they'll be losing millions and billions of dollars. I just think it's an educational process the same way—from what I saw in China, with that many people, I'm not sure how you would attack the problem in China at all.

Mr. SCHEUER. Yes?

Mr. MARUSKA. Mr. Scheuer, I hesitated or I would like to answer your question——

Mr. SCHEUER. Please do.

Mr. MARUSKA [continuing]. About the technology being utilized in the zoological field. Taking some of those exciting technologies that have been developed in the livestock industry and applying them to the zoo field has been one of the most exciting areas in our profession. Recently at the Cincinnati Zoo we've taken a species, a common species like the eland and we've used her as a surrogate for the rare bongo and transferred actually one species into another. That was the first time historically that that has been done.

In the area of rhinos we are now in the progress of—in fact, this Friday there will be an immobilization of a white rhino at Kings Island Wild Animal Park where our research director will be examining that animal with the possibility of using the white rhino as a surrogate for perhaps some of the rarer rhino species.

This work is ongoing and exciting, but it's expensive. And each species has to be dealt with differently. You're talking about immobilizing animals and animals that are relatively dangerous to work with, or could be, not only dangerous from our standpoint but you might even lose the life of that animal. So we're taking it rather slowly. The results are very promising.

Being able to bank genetically frozen sperm and eggs of all these various species is also very promising.

Mr. SCHEUER. When you say the black rhino is a surrogate, do you mean——

Mr. MARUSKA. No, the white rhino is the surrogate for the black. Taking a black rhino egg and implanting it in a white rhino, having that white rhino carry the black to term and give birth to another species.

Mr. SCHEUER. Well, you don't mean another black rhino.

Mr. MARUSKA. A black rhino, yes.

Mr. SCHEUER. It's a cross between the black and the white.

Mr. MARUSKA. No, it's not a cross, no.

Mr. SCHEUER. If you're using the mother's——

Mr. **Maruska**. What we do is we take an animal, a female, superovulate that female. She's bred with a normal black rhino. We superovulate——

Mr. **Scheuer**. This is a black rhino female and a black rhino male?

Mr. **Maruska**. A black rhino female and a black rhino male.

Mr. **Scheuer**. And that fertilized egg is placed in a white rhino female?

Mr. **Maruska**. We take a fertilized egg and we flush it, and then we plant it in a——

Mr. **Scheuer**. White——

Mr. **Maruska** [continuing]. Well, this is in theory—plant it inside the white, and the white would carry the black to term.

The decided advantage is by superovulation you can produce more eggs. For example, in the eland, which produces only one calf per year, every 9 months, we were able to, by superovulating, flush 30 embryo from that eland. So, in essence, you could implant in surrogates 30 embryo, and then she's ready to be bred again. So it does have some certainly marvelous possibilities.

Mr. **Scheuer**. Well, Dr. Hanna—Mr. Hanna, do you have any special advice for us as to how we can be effective on this matter on our trip to China in November? You can mention it here or you can meet with us privately after this hearing.

Mr. **Hanna**. I'd just probably meet with you privately.

Mr. **Scheuer**. OK, that's fine.

Well, this last panel has given me a little bit of hope that we're not going to see the obliteration and the extinction of the rhino on our watch. For that hope and encouragement, I thank you.

I thank all of the other panels for the magnificent work that all of you are doing to alert the American public, to pressure our Government, to pressure the governments overseas, and to continue to make progress on a matter that so affects every American in terms of who we are and what we are. If we are willing to let these great, noble beasts that have survived 60 million years—if we are willing to let them disappear from the face of the Earth, that's a pitiful reflection on who and what we are.

And I am grateful to all of you who have appeared today for your efforts in saying no, we're not going to let this happen on our watch.

Thank you very much. It's been a wonderful hearing.

[Whereupon, at 12:01 p.m., the hearing recessed to reconvene at the call of the Chair.]

APPENDIX 1

AN UPDATE ON THE PLIGHT OF THE RHINOCEROS SPECIES

(Mr. SCHEUER asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. SCHEUER. Mr. Speaker, late last week the Science and Technology Committee's Subcommittee on Natural Resources, Agriculture Research and Environment, which I chair, held a hearing on the plight of the rhinoceros, a noble beast virtually at the edge of extinction. The five species of rhinos found in Asia and Africa have dwindled to the danger point, mostly because poachers have been illegally killing these great beasts to obtain their horns which are worth twice their weight in gold. One rhino horn is worth far more than the average worker in Africa can earn in a year. In North Yemen the horns are used to make highly treasured dagger handles, while in the Far East the shavings are prized, erroneously, as a cure for fever.

Mr. Speaker, Singapore, which serves as a trading center and a transit point for these horns, is a truly civilized developing country led by one of the most able and astute chiefs of state in the world. It is fast becoming a banking and finance center of Asia. This is a country that sells the United States $4 billion in merchandise annually, compared to the $3.4 billion they purchase from us, thus enjoying a $600 million trade surplus.

Despite our pleas and the pleas of civilized countries the world over, Singapore refuses to abide by the Convention on International Trade in Endangered Species. Its role in the rhino horn trade contributes greatly to the demise of the rhino.

Such a shabby role ill-behooves Singapore's dignity.

Mr. Speaker, I am happy to report that there have been some positive developments in the past few days concerning protection of the rhino. On Thurday, the same day as the hearing, the Department of the Interior's Fish and Wildlife Service announced that the United States will prohibit future imports of wildlife from Singapore.

Following the hearing, State Department officials assured me that they are developing an action plan aimed at protecting the rhino.

These are hopeful signs and I commend the efforts of the State Department and the Interior Department.

We must send a clear signal to the Government of Singapore that its deplorable role as a transit country and trade marketplace for rhino horns it totally inappropriate for a nation that is fast becoming an economic, political and social role model for the entire developing world.

Let's hope Singapore gets the message.

The rhino is the second largest manmal on Earth and has survived for 60 million years with no known predator except man.

Are we to see the rhino wiped out during our watch?

SINGAPORE INCREASES EFFORTS TO PROTECT RHINOCEROS FROM EXTINCTION

(Mr. SCHEUER asked and was given permission to address the House for 1 minute and to revise and extend his remarks.)

Mr. SCHEUER. Mr Speaker, the five species of rhinoceroses that inhabit our planet are on the verge of extinction. After surviving as prehistoric manmals, the second largest on Earth, for 60 million years, they are about to succumb to their only known predator, man.

The vast poaching by hunters who illegally kill these great animals for the profit from selling their horns is about to do them in. Following a hearing of the Science and Technology Subcommittee on Natural Resources and Environment, which I chair, I received a letter from my good friend, Ambassador Tommy Koh of Singapore, in which he noted a change of heart on the part of his government on the rather inapporpriate role that they have been playing as one of the principal trading centers for rhino horns.

In his letter, Ambassador Koh said:

"Concerning your inquiry regarding the sale of rhinoceroses in Singapore, my government has informed me that the issue does not arise because in November or December this year, Singapore will accede to the Convention on International Trade in Endangered Species of Wild Flora and Fauna [CITES]. My government has already informed the CITES Secretariat, on the 22nd of September 1986, of its intention to accede to the convention."

Singapore's decision to join CITES is a key element in the international effort to save the rhino, the elephant and a vast number of other mammals and birds from extinction.

Credit for Singapore's decision to join the effort to save the rhino and other endangered species belongs in large part to the U.S. agencies involved in this effort—the State Department and the Interior Department which took decisive actions to protect the rhino immediately following my subcommittee hearing, and, of course, to the forward looking Government of Singapore led by one of the most extraordinarily talented and able chief executives on this planet.

APPENDIX 2

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UNCLAS STATE 303164

E.O. 12356: N/A
TAGS: SENV, SK, ETRD
SUBJECT: BAN ON WILDLIFE TRADE

REF: (A) SINGAPORE 9353
-- (B) STATE 115290
-- (C) STATE 234149
-- (D) SINGAPORE 02593

1. SUMMARY. DEPARTMENT APOLOGIZES FOR DELAY IN RESPONDING TO SINGAPORE'S REFERENCE A. WE APPRECIATE EMBASSY'S EFFORTS TO PERSUADE GOS OFFICIALS OF THE SERIOUSNESS OF THE ILLEGAL SHIPMENT OF WILDLIFE AND WILDLIFE PRODUCTS ISSUE. HOWEVER, SINCE THE GOS APPEARS UNWILLING TO TAKE REASONABLE MEASURES TO CONTROL THE FLOW OF THESE ITEMS THROUGH ITS TERRITORY, THE USG IS PLANNING TO PUBLISH A NOTICE OF INFORMATION CONCERNING SINGAPORE WHICH WILL RESULT IN A DEFACTO EMBARGO ON ALL WILDLIFE AND WILDLIFE PRODUCTS SHIPPED TO THE UNITED STATES FROM SINGAPORE. ACTION REQUEST PARA 7. END SUMMARY.

2. THE NOTICE OF INFORMATION IS A DEVICE USED BY THE U.S. FISH AND WILDLIFE SERVICE (FWS) TO ANNOUNCE TO THE PUBLIC ACTIONS WHICH THE FWS PLANS TO TAKE CONCERNING THE IMPORT AND EXPORT OF WILDLIFE AND WILDLIFE PRODUCTS UNDER THE LACEY ACT AMENDMENTS OF 1981. SINCE WILDLIFE EXPORT PERMITS ISSUED BY SINGAPORE DO NOT INDICATE COUNTRY OF ORIGIN OR CONTAIN THE NON-DETRIMENT STATEMENT DESCRIBED BELOW, THE FWS CANNOT PROPERLY ENFORCE U.S. LAWS AND REGULATIONS REGARDING THE IMPORT OF THESE ITEMS INTO THE UNITED STATES. THEREFORE FWS IS PLACING A NOTICE OF INFORMATION IN THE FEDERAL REGISTER THAT NO SHIPMENTS OF WILDLIFE AND WILDLIFE PRODUCTS WILL BE CLEARED FOR ENTRY FROM SINGAPORE INTO THE UNITED STATES. THIS ACTION WILL BE TAKEN FOR SHIPMENTS MADE FROM SINGAPORE AFTER SEPTEMBER 30.

3. IN ORDER TO PERMIT ENFORCEMENT OF U.S. LAWS AND REGULATIONS CONCERNING THE PROTECTION OF ENDANGERED AND THREATENED SPECIES, THE FWS MUST HAVE A STATEMENT ON THE EXPORT PERMIT AS TO THE ACTUAL COUNTRY OF ORIGIN. THIS IS ESPECIALLY VITAL WITH A COUNTRY SUCH AS SINGAPORE WHERE MOST SHIPMENTS ARE ACTUALLY RE-EXPORTS. IN ADDITION, U.S. REGULATIONS REQUIRE THAT WILDLIFE SHIPMENTS CONTAIN THE "NON-DETRIMENT" STATEMENT INCLUDED IN THE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES (CITES), OR AN EQUIVALENT. THAT STATEMENT READS "I, (SIGNING OFFICIAL), HEREBY CERTIFY THAT THE SHIPMENT OF WILDLIFE OR PLANTS COVERED BY THIS DOCUMENT IS IN ACCORDANCE WITH THE LAWS OF (COUNTRY), WILL NOT BE DETRIMENTAL TO THE SURVIVAL OF THE SPECIES IN THE WILD, AND, IF LIVING, WILL BE TRANSPORTED IN A MANNER WHICH WILL MINIMIZE THE RISK OF INJURY, DAMAGE TO HEALTH OR CRUEL TREATMENT." DOCUMENTS FROM SINGAPORE DO NOT NORMALLY CONTAIN THIS STATEMENT.

4. THE ISSUE OF PANGOLIN SKINS IS ONLY AN EXAMPLE OF THE LACK OF COOPERATION AND RESPONSIBILITY SHOWN IN THIS AREA BY THE GOS. THERE IS NO RECORD OF ANY TRADE IN PANGOLIN COMING FROM A COUNTRY OTHER THAN THE THREE OF ITS MAIN HABITATS: MALAYSIA, THAILAND AND INDONESIA. OFFICIALS OF ALL THREE COUNTRIES HAVE INFORMED THE USG THAT TRADE IN PANGOLINS HAS BEEN PROHIBITED BY THEIR GOVERNMENTS FOR SOME TIME, INCLUDING THE TIME PERIOD COVERED IN THIS SHIPMENT. NEVERTHELESS,TTHE PERMIT ISSUED BY THE GOS STATES THAT A PROPER EXPORT PERMIT ISSUED BY AN UNIDENTIFIED COUNTRY WAS SEEN AND NOTED. EVEN IN VIEW OF THIS SEEMING CONTRADICTION, THE GOVERNMENT WILL NOT FACILITATE OR ALLOW A REASONABLE INVESTIGATION INTO THAT PERMIT OR THE ORIGIN OF THAT SHIPMENT.

5. CANCELLATION OF THIS NOTICE OF INFORMATION AND RESUMPTION OF CLEARANCES FOR PROPER SHIPMENTS FROM SINGAPORE CAN BE EFFECTED ONLY WHEN THE GOVERNMENT OF SINGAPORE HAS TAKEN CONCRETE STEPS TO COOPERATE WITH THE USG IN CONTROLLING AND PROHIBITING THE TRADE IN WILDLIFE AND WILDLIFE PRODUCTS OBTAINED IN VIOLATION OF LAW. AT A MINIMUM, THE PERMITS ISSUED BY SINGAPORE SHOULD INCLUDE INFORMATION AS TO THE COUNTRY OF ORIGIN AND A NON-DETRIMENT STATEMENT.

6. FYI. RECENT CONGRESSIONAL HEARINGS INTO ENDANGERED SPECIES FOCUSED ON RHINO HORN TRADE INTO SINGAPORE. SEPTEL WILL FOLLOW. END FYI.

7. ACTION: PLEASE INFORM THE GOS OF THE USG DECISION TO REFUSE ENTRY OF ALL WILDLIFE AND WILDLIFE PRODUCTS SHIPPED FROM SINGAPORE AFTER SEPTEMBER 30, AND EXPLAIN TO GOVERNMENT OFFICIALS THE STEPS WE HOPE THEY WILL TAKE TO CORRECT THE UNDERLYING PROBLEM. WALLIS

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UNCLAS STATE 306031

E.O. 12356: N/A
TAGS: SENV, ETRD, SN
SUBJECT: BAN ON WILDLIFE TRADE

REF: (A) STATE 303164
- (B) SINGAPORE 11379

1. FOLLOWING IS TEXT OF FEDERAL REGISTER NOTICE OF SEPTEMBER 25 CONCERNING BAN ON WILDLIFE TRADE WITH SINGAPORE:

2. BEGIN TEXT

ENDANGERED SPECIES CONVENTION, FOREIGN LAW NOTIFICATION, SINGAPORE

SUBJECT

NOTICE OF INFORMATION NO. 9. THIS IS A SCHEDULE I NOTICE: WILGERNESS SUBJECT TO THIS NOTICE IS SUBJECT TO DETENTION, TO REFUSAL OF CLEARANCE' OR TO SEIZURE AND FORFEITURE, IF IMPORTED INTO THE UNITED STATES.

SUBJECT

SINGAPORE-BAN ON U.S' IMPORT OF ALL WILDLIFE EXPORTS AND REEXPORTS'

SOURCE OF FOREIGN LAW INFORMATION

UNITED STATES THROUGH THE DEPARTMENT OF STATE.

ACTION BY FISH AND WILDLIFE SERVICE

DESPITE REQUESTS FROM THE U.S. FISH AND WILDLIFE SERVICE THROUGH THE DEPARTMENT OF STATE, THE GOVERNMENT OF SINGAPORE FAILS TO PROVIDE AUTHENTICATING DOCUMENTS OR SUPPORTING INFORMATION FOR WILDLIFE SHIPMENTS ALLEGED TO BE CAPTIVE BRED OR RE-EXPORTED FROM SINGAPORE. NO INFORMATION ESTABLISHING THE COUNTRY OF ORIGIN FOR REEXPORTED WILDLIFE IS SUPPLIED EITHER ON REEXPORT CERTIFICATES OR IN RESPONSE TO REQUESTS FOR INFORMATION SUBSEQUENT TO IMPORTATION INTO THE UNITED STATES. EXPORT PERMIT FAIL TO STATE THE EFFECT OF EXPORT OR REEXPORT UPON THE WILD POPULATIONS OF THE WILDLIFE' BASED UPON ITS INABILITY TO AUTHENTICATE INFORMATION PROVIDED BY SINGAPORE ON EXPORT AND RE-EXPORT DOCUMENTS SUBMITTED IN COMPLIANCE WITH REQUIREMENTS FOR NONPARTIES TO THE CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES), THE SINGAPORE EXPORT AND REEXPORT DOCUMENTS CAN NO LONGER BE ACCEPTED BY THE UNITED STATES AS A CITES PARTY IN GOOD FAITH COMPLIANCE WITH CITES' IT IS IMPOSSIBLE FOR THE UNITED STATES TO ESTABLISH LEGAL EXPORT FOR RE-EXPERTED WILDLIFE OR STATUS OF CAPTIVE BRED OR OF EXPORTED WILDLIFE IN COMPLIANCE WITH ITS OWN LAWS AND WITH CITES WITHOUT THE PROPER AUTHENTICATING DOCUMENTATION FROM SINGAPORE. SINCE THE INFORMATION IS NOT AVAILABLE THROUGH THE GOVERNMENT OF SINGAPORE. EFFECTIVE IMMEDIATELY AND UNTIL FURTHER NOTICE, NO SHIPMENTS OF WILDLIFE OR OF WILDLIFE PRODUCTS EXPORTED OR RE-EXPORTED FROM SINGAPORE OR WHICH DECLARE SINGAPORE AS COUNTRY OF ORIGIN MAY BE IMPORTED LEGALLY INTO THE UNITED STATES.

EFFECTIVE DATE: SEPTEMBER 25. 1986.
EXPIRATION DATE: UNTIL FURTHER NOTICE.

3. END TEXT' WHITEHEAD

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UNCLAS STATE 309077

E.O. 12356: N/A
TAGS: SENV, ETRD, SN
SUBJECT: BAN ON WILDLIFE TRADE
REF: (A) SINGAPORE 9353
-- (B) SINGAPORE 11379
-- (C) STATE 303164
-- (D) SINGAPORE 11440

1. SUMMARY. DESPITE PAST ASSURANCES ON THE PART OF THE GOS THAT IT WOULD SOON BE JOINING CITES AND THAT EFFORTS WOULD BE MADE TO ELIMINATE ILLEGAL WILDLIFE TRADE, NO IMPROVEMENTS HAVE BEEN APPARENT. AS PARTY TO CITES, THE USG IS UNABLE TO ACCEPT WILDLIFE SHIPMENTS UNLESS EXPORTING COUNTRY PROVIDES DOCUMENTATION "COMPARABLE" TO THAT PROVIDED BY OTHER CITES PARTIES. FURTHER, US DOMESTIC LAW PROHIBITS IMPORTS OF WILDLIFE OR WILDLIFE PRODUCTS UNLESS ACCEPTABLE ASSURANCE IS PROVIDED THAT SUCH ITEMS WERE LAWFULLY TAKEN AND EXPORTED FROM THE COUNTRY OF ORIGIN. THEREFORE, USG MUST INSIST THAT THE GOS ACT CONSISTENTLY WITH THE PROVISIONS OF CITES, AND SHOW RESPECT FOR THE WILDLIFE PROTECTION LAWS OF OTHER COUNTRIES BEFORE FWS WILL LIFT THE BAN. ACTION REQUEST, PARAGRAPHS 7 AND 8. END SUMMARY.

2. REFTELS OUTLINED PROBLEM OF TRADE IN ENDANGERED SPECIES INVOLVING SINGAPORE. EMBASSY ALSO AWARE THAT THE PROBLEM WITH SINGAPORE IS A MATTER OF CONCERN TO MORE THAN THE USG. ON MARCH 4, 1986, THE CITES SECRETARIAT ISSUED A NOTIFICATION TO THE PARTIES ADDRESSING THE CONTINUING PROBLEMS OF SINGAPORE'S TRADE IN SKINS. IN THIS NOTIFICATION THE SECRETARIAT ADVISED CITES PARTIES THAT "...SUBSTANTIAL TRADE IN SKINS OF APPENDIX II AND III SPECIES (MAINLY SNAKES) IS OCCURRING THROUGH SINGAPORE (A NON-PARTY STATE) IN CONTRAVENTION OF THE PROVISIONS OF THE CONVENTION." THE SECRETARIAT URGED ALL PARTIES TO ENFORCE THE REQUIREMENTS OF THE CONVENTION AND RESOLUTION CONF. 3.8 IN WHICH PARTIES AGREED NOT TO ACCEPT EXPORT OR RE-EXPORT DOCUMENTS FROM NON-PARTY STATES UNLESS SUCH DOCUMENTS INCLUDE A REFERENCE TO THE EXPORT PERMIT OR CERTIFICATE ISSUED BY THE COUNTRY OF ORIGIN, TOGETHER WITH CERTIFICATION THAT THE ORIGINAL DOCUMENT HAS BEEN RETAINED BY THE AUTHORITIES. FURTHER, EACH EXPORT PERMIT MUST INCLUDE THE NON-DETRIMENT STATEMENT REQUIRED BY CITES.

3. IN RESPONSE TO THE SPECIFIC QUESTION IN REFERENCE A CONCERNING THE STATUS OF TROPICAL FISH, WE NOTE THAT UNDER USG LAWS THE TERM "FISH OR WILDLIFE" INCLUDES ALL MEMBERS OF THE ANIMAL KINGDOM THAT ARE NORMALLY FOUND IN THE WILD, WHETHER OR NOT THE INDIVIDUAL SPECIMEN IN QUESTION WAS RAISED IN CAPTIVITY. TROPICAL FISH ARE CLEARLY INCLUDED IN THIS DEFINITION AND, THUS, ARE SUBJECT TO THE CURRENT BAN ON IMPORTATION. FYI: FWS HAS EVIDENCE THAT SINGAPORE, AND OTHER COUNTRIES FREQUENTLY USE CLAIMS OF "CAPTIVE BRED" STATUS TO HIDE TRUE ORIGIN OF ILLEGALLY TAKEN OR IMPORTED WILDLIFE, INCLUDING TROPICAL FISH.

4. IN RESPONSE TO A QUESTION IN REFERENCE A CONCERNING THE BOTTOM LINE FOR REMOVING THE CURRENT BAN, THE GOS MUST ACT CONSISTENTLY WITH CITES AND SHOW RESPECT FOR THE WILDLIFE PROTECTION LAWS OF OTHER COUNTRIES. SPECIFIC CONDITIONS THAT MUST BE MET BY GOS ARE:

A. CESSATION OF PROHIBITED TRADE.
--WHETHER OR NOT GOS JOINS CITES, FWS WOULD CONSIDER A CESSATION OF TRADE THAT IS PROHIBITED BY CITES AS A MAJOR STEP TOWARD LIFTING THE BAN. FOR EXAMPLE, CITES PROHIBITS COMMERCIAL TRADE IN RHINOCEROS AND OTHER APPENDIX I SPECIES; HOWEVER, SINGAPORE IS A MAJOR TRADER IN ILLEGAL RHINOCEROS PRODUCTS. FURTHER,

SINGAPORE TRADE IN PANGOLIN SKINS HAS LONG BEEN A PROBLEM FOR BOTH THE USG AND NEIGHBORING COUNTRIES THAT PROTECT NATIVE PANGOLINS AS HAS THE TRADE IN SNAKE SKINS NOTED IN PARAGRAPH 2, ABOVE.

B. PROPER DOCUMENTATION.
--GOS MUST BEGIN ISSUING EXPORT AND RE-EXPORT DOCUMENTS THAT FULLY COMPLY WITH THE PROVISIONS OF CITES. THIS WOULD REQUIRE THAT GOS INDICATE BOTH THE COUNTRY OF ORIGIN OF THE WILDLIFE, INCLUDING THE NUMBER OF THE EXPORT PERMIT THAT ACCOMPANIED THE WILDLIFE UPON IMPORTATION, AND INCLUDE THE NON-DETRIMENT STATEMENT THAT FWS HAS PREVIOUSLY REQUESTED ON ALL EXPORT DOCUMENTS. NON-DETRIMENT STATEMENTS MUST BE BASED ON FACTUAL INFORMATION THAT IS AVAILABLE UPON REQUEST.

C. COOPERATION WITH INVESTIGATIONS.
--GOS MUST FULLY COOPERATE WITH THE USG AND OTHER COUNTRIES IN INVESTIGATIONS INVOLVING SUSPECTED ILLEGAL WILDLIFE THAT HAS BEEN EXPORTED OR RE-EXPORTED FROM SINGAPORE. IN THE PAST SINGAPORE HAS BEEN RELUCTANT TO PROVIDE SUCH ASSISTANCE DESPITE EVIDENCE THAT THE WILDLIFE IN QUESTION HAD BEEN ILLEGALLY TAKEN IN OR EXPORTED FROM THE COUNTRY OF ORIGIN.

D. EVIDENCE OF COMPLIANCE.
--ALTHOUGH THE GOS HAS BEEN WILLING IN THE PAST TO GIVE USG ITS ASSURANCES THAT IT WILL INITIATE REFORMS IN ITS WILDLIFE TRADE PRACTICES, IT HAS FAILED TO IMPLEMENT SUCH REFORMS. ACCORDINGLY, FWS REQUIRES COPIES OF THE LAWS, REGULATION, ORDERS OR OTHER DIRECTIVES THAT THE GOS ISSUES TO IMPLEMENT THE CHANGES NECESSARY TO BRING THE GOS IN COMPLIANCE WITH THE PROVISIONS OF CITES AND WHICH WILL DEMONSTRATE GOS RESPECT FOR THE WILDLIFE CONSERVATION LAWS OF OTHER COUNTRIES.

5. THE GOS HAS INDICATED (REF. D) THAT IT INTENDS TO ACCEDE TO CITES IN THE NEAR FUTURE. IF THE GOS WERE TO JOIN CITES, THIS WOULD BE A SIGNIFICANT DEMONSTRATION OF INTENT. HOWEVER, THE USG WOULD ALSO CONSULT WITH THE CITES SECRETARIAT TO LEARN WHEN SINGAPORE BEGINS COMPLIANCE WITH CITES PROVISIONS.

6. AS MENTIONED IN REF. C, RECENT CONGRESSIONAL HEARINGS BY THE HOUSE SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE RESEARCH AND ENVIRONMENT OF THE COMMITTEE ON SCIENCE AND TECHNOLOGY, FOCUSED SPECIAL

PAGE 02 OF 02

ATTENTION ON THE LARGE ROLE OF SINGAPORE IN THIS PROHIBITED TRADE. WITNESSES AT THE HEARING STATED MUCH

OF THE WORLD'S TRADE IN RHINO HORN PASSES THROUGH SOUTHEAST ASIA, WITH MOST OF THAT HANDLED IN SINGAPORE. FOLLOWING THE PUBLIC HEARINGS, STATE AND FWS OFFICIALS MET PRIVATELY WITH THE CHAIRMAN OF THE SUBCOMMITTEE, REP. JAMES SCHEUER, ON THE RHINO ISSUE.

7. ACTION REQUESTED FOR SINGAPORE: DEPARTMENT HOPES THAT USG ACTION IN IMPOSING A BAN ON WILDLIFE AND WILDLIFE PRODUCTS FROM SINGAPORE WILL GIVE IMPETUS TO A QUICK RESOLUTION OF THE PROBLEM OF PROHIBITED TRADE. WE RECOGNIZE SINGAPORE'S UNIQUE POSITION AS THE FOCUS OF MUCH OF THE TRADE OF SOUTHEAST ASIA AND HOPE THAT CORRECTIVE ACTION BY THAT GOVERNMENT WILL GO A LONG WAY TOWARDS IMPROVING WORLDWIDE PROSPECTS FOR PROTECTION OF ENDANGERED SPECIES. EMBASSY IS REQUESTED TO BRING USG POSITION OUTLINED ABOVE TO ATTENTION OF APPROPRIATE GOS OFFICIALS.

8. ACTION REQUESTED FOR GENEVA: PLEASE PASS TO CITES SECRETARIAT. WHITEHEAD

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UNCLAS SINGAPORE 12716

E.O. 12356: N/A
TAGS: ETRD, SENV, SN, US
SUBJECT: BAN ON TRADE IN RHINO HORN

REF: SINGAPORE 12453

1. GOS REGULATIONS REFERRING TO ITS BAN ON TRADING IN RHINO HORN ARE QUOTED PARA 2. THE REGULATIONS ARE IN THREE PARTS: FIRST, PARTS II, SECTIONS 4, 5 AND 6, CHAPTER 240 OF "THE CONTROL OF IMPORTS AND EXPORTS ACT" WHICH PROVIDE FOR GOS PROHIBITION AND ENFORCEMENT MACHINERY; SECOND, THE 1974 LIST OF PROHIBITED TRADE GOODS; AND THIRD, THE 1986 INCLUSION OF RHINO HORN TO THE 1974 LIST OF PROHIBITED TRADE GOODS. EMBASSY HAS ALSO POUCHED GOS GAZETTE PAGES CARRYING THESE REGULATIONS TO EAP/IMBS ON OCTOBER 31.
-
2. CHAPTER 242 EXCERPT:

PART II

CONTROL OF IMPORTATION, EXPORTATION, ETC.
- BY ORDER OF THE MINISTER

--- 4. -- (1) THE MINISTER MAY BY ORDER PROVIDE --

- (A) FOR THE PROHIBITION, ABSOLUTELY OR CONDITIONALLY OR FOR THE REGULATION, IN ALL CASES OR IN ANY SPECIFIED-CASE OR CLASS OF CASE AND SUBJECT TO SUCH EXCEPTIONS, IF ANY, AS MAY BE MADE BY OR UNDER THE ORDER, OF THE EXPORT OR IMPORT OR OF THE CARRIAGE COASTWISE OR OF THE SHIPMENT AS SHIPS STORES OR OF THE TRANSHIPMENT OF ALL GOODS OR OF GOODS OF ANY SPECIFIED CLASS OR DESCRIPTION;

- (B) FOR THE IMPOSITION AND RECOVERY IN CONNECTION WITH ANY SCHEME OF CONTROL FOR WHICH PROVISION IS MADE BY ANY ORDER UNDER THIS SECTION OF SUCH FEES AND CHARGES AS MAY BE SPECIFIED AND FOR THE DISPOSAL THEREOF;

- (C) THAT ANY CONTRAVENTION OF ANY PROVISION OF ANY ORDER SHALL BE AN OFFENCE AND SHALL BE PUNISHABLE BY FINE OR IMPRISONMENT OR BY BOTH SUCH FINE AND IMPRISONMENT:
-
- PROVIDED THAT --

- (I) NO SUCH FINE SHALL, IN RESPECT OF A FIRST OFFENCE, EXCEED THE SUM OF TEN THOUSAND DOLLARS OR TREBLE THE VALUE OF THE GOODS IN RESPECT OF WHICH THE OFFENCE WAS COMMITTED WHICHEVER MAY BE THE GREATER, OR IN RESPECT OF A SECOND OR SUBSEQUENT OFFENCE OF THE SAME OR A SIMILAR KIND, EXCEED THE SUM OF TWENTY THOUSAND DOLLARS OR FOUR TIMES THE VALUE OF SUCH GOODS WHICHEVER MAY BE THE GREATER; AND

- (II) NO SUCH PENALTY OF IMPRISONMENT SHALL, IN RESPECT OF A FIRST OFFENCE, EXCEED THE TERM OF TWELVE MONTHS OR, IN RESPECT OF A SECOND OR SUBSEQUENT OFFENCE OF THE SAME OR A SIMILAR KIND, EXCEED THE TERM OF TWO YEARS.

-- (2) ALL ORDERS MADE BY THE MINISTER UNDER THIS SECTION SHALL BE PUBLISHED IN THE GAZETTE AND SHALL BE PRESENTED TO PARLIAMENT AS SOON AS MAY BE AFTER PUBLICATION AND IF A RESOLUTION IS PASSED PURSUANT TO A MOTION NOTICE WHEREOF HAS BEEN GIVEN FOR A SITTING DAY NOT LATER THAN THE FIRST AVAILABLE SITTING DAY OF PARLIAMENT NEXT AFTER THE EXPIRY OF ONE MONTH FROM THE DATE WHEN SUCH ORDERS ARE SO PRESENTED ANNULLING THE ORDERS OR ANY PART THEREOF AS FROM A SPECIFIED DATE, THE ORDERS OR THAT PART THEREOF AS THE CASE MAY BE SHALL THEREUPON BECOME VOID AS FROM THAT DATE BUT WITHOUT PREJUDICE TO THE VALIDITY OF ANYTHING PREVIOUSLY DONE THEREUNDER OR TO THE MAKING OF NEW ORDERS.
-
--- 5. WHERE PROVISION IS MADE BY ANY ORDER FOR THE ISSUE OF ANY LICENCE OR PERMIT BY ANY OFFICER OR PERSON, SUCH OFFICER OR PERSON SHALL, SUBJECT TO ANY EXPRESS PROVISION TO THE CONTRARY CONTAINED IN THE ORDER, HAVE AN ABSOLUTE DISCRETION --
- (A) AS TO THE ISSUE AND TERMS OF SUCH LICENCE OR PERMIT AND AS TO THE CANCELLATION OR SUSPENSION THEREOF AT ANY TIME; AND

- (B) AS TO THE CONDITIONS TO BE ATTACHED TO THE ISSUE OF SUCH LICENCE OR PERMIT AND THE CANCELLATION OR VARIATION FROM TIME TO TIME OF SUCH CONDITIONS:

- PROVIDED THAT ANY CANCELLATION, SUSPENSION OR VARIATION OF THE CONDITIONS OF ANY IMPORT LICENCE OR PERMIT SHALL NOT BE ENFORCED UNTIL AN EXISTING IRREVOCABLE LETTER OF CREDIT ISSUED IN RESPECT OF IT HAS EXPIRED UNLESS SUCH OFFICER OR PERSON HAS REASON TO BELIEVE THAT SUCH IRREVOCABLE LETTER OF CREDIT WAS NOT ESTABLISHED IN GOOD FAITH.
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- 6. (1) CANCELLATION, SUSPENSION, OR VARIATION OF THE CONDITIONS OF ANY LICENCE OR PERMIT, ISSUED BY VIRTUE OF AN ORDER, MAY BE EFFECTED BY ENDORSEMENT THEREOF ON THE LICENCE OR PERMIT, OR BY SERVICE OF A WRITTEN NOTICE OF THE CANCELLATION, SUSPENSION OR VARIATION ON THE HOLDER OF THE LICENCE OR PERMIT, AND ANY SUCH SERVICE SHALL BE GOOD SERVICE IF SUCH WRITTEN NOTICE IS LEFT WITH THE HOLDER OF THE LICENCE OR PERMIT, OR IS LEFT WITH ANY ADULT PERSON AT THE USUAL OR LAST KNOWN PLACE OF RESIDENCE OR BUSINESS OF SUCH HOLDER, OR IS SERVED ON SUCH HOLDER BY POST AT HIS USUAL OR LAST KNOWN PLACE OF RESIDENCE OR BUSINESS, OR IF, IN THE CASE OF A PERMIT, IT IS LEFT WITH ANY PERSON HAVING THE POSSESSION, CUSTODY OR CONTROL OF THE GOODS TO WHICH THE PERMIT RELATES.

- (2) IF ANY SUCH LICENCE OR PERMIT IS CANCELLED OR SUSPENDED THE HOLDER THEREOF SHALL, UNLESS IT HAS OTHERWISE BEEN LAWFULLY DISPOSED OF, FORTHWITH SURRENDER IT TO THE OFFICER BY WHOM IT IS SO CANCELLED OR SUSPENDED AND, IN DEFAULT

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THEREOF, SHALL BE GUILTY OF AN OFFENCE AGAINST THIS ACT AND SHALL BE LIABLE ON CONVICTION TO A FINE NOT EXCEEDING ONE THOUSAND DOLLARS.
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1974 LIST

THE CONTROL OF IMPORTS AND EXPORTS ACT.
-            (CHAPTER 248).

THE PROHIBITION OF IMPORTS, EXPORTS AND
TRANSHIPMENTS ORDER, 1974.

- IN EXERCISE OF THE POWERS CONFERRED BY SECTION 4 OF THE CONTROL OF IMPORTS AND EXPORTS ACT, THE MINISTER FOR FINANCE HEREBY MAKES THE FOLLOWING ORDER: --

- 1. THIS ORDER MAY BE CITED AS THE PROHIBITION OF IMPORTS, EXPORTS AND TRANSHIPMENTS ORDER, 1974.

- 2. THE GOODS SPECIFIED IN THE FIRST COLUMN OF THE SCHEDULE TO THIS ORDER ARE PROHIBITED FROM BEING IMPORTED INTO OR EXPORTED OUT OF OR TRANSHIPPED IN SINGAPORE AS INDICATED IN THE SECOND COLUMN OF THE SAID SCHEDULE.
-
- 3. THE FOLLOWING ORDERS ARE HEREBY CANCELLED: --

- (A) THE PROHIBITION ON IMPORTS (AMUSEMENT MACHINES) ORDER, 1956;

- (B) THE PROHIBITIN OF IMPORTS (CIGARETTE LIGHTERS OF SPECIFIED SHAPES) ORDER, 1962;

- (C) THE PROHIBITION OF IMPORTS (CURRENCY IMPRINT) ORDER, 1969;

- (D) THE PROHIBITION OF EXPORTS (CURRENCY IMPRINT) ORDER, 1969; AND
- (E) THE PROHIBITIN OF IMPORTS (FIRE-CRACKERS) ORDER, 1970.
-
- THE SCHEDULE

FIRST COLUMN - GOODS. -------------	SECOND COLUMN PROHIBITION ON. ----------------
---1. CIGARETTE LIGHTERS IN THE SHAPE OF A PISTOL OR REVOLVER	IMPORT.
---2. TOY CURRENCY NOTES, TOY COINS OR GOODS BEARING THE IMPRINT OF ANY CURRENCY NOTE, BANK NOTE OR COIN WHICH ARE LEGAL TENDER IN ANY COUNTRY OR TERRITORY -	IMPORT & EXPORT.
---3. FIRE-CRACKERS	IMPORT.

MADE THIS 5TH DAY OF JULY, 1974.

NGIAM TONG DOW,
PERMANENT SECRETARY (DEVELOPMENT DIVISION),
MINISTRY OF FINANCE,
SINGAPORE.

(TD. I. & E. 015/67; AG./L./62/73)

- (TO BE PRESENTED TO PARLIAMENT UNDER SECTION 4 (2) OF THE CONTROL OF IMPORTS AND EXPORTS ACT).
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1986 RINO HORN INCLUSION

THE CONTROL OF IMPORTS AND EXPORTS ACT.
(CHAPTER 248).

THE PROHIBITION OF IMPORTS, EXPORTS AND
TRANSHIPMENTS (AMENDMENT) ORDER 1986

IN EXERCISE OF THE POWERS CONFERRED BY SECTION 4 OF THE CONTROL OF IMPORTS AND EXPORTS ACT, THE MINISTER OF STATE CHARGED WITH THE RESPONSIBILITY OF THE MINISTER FOR TRADE AND INDUSTRY MAKES THE FOLLOWING ORDER:

- 1. THIS ORDER MAY BE CITED AS THE PROHIBITIN OF IMPORTS, EXPORTS AND TRANSHIPMENTS (AMENDMENT) ORDER, 1986 AND SHALL COME INTO OPERATION ON 24TH OCTOBER 1986.
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- 2. THE SCHEDULE TO THE PROHIBITION OF IMPORTS, EXPORTS AND TRANSHIPMENTS ORDER 1974 IS AMENDED BY INSERTING, IMMEDIATELY AFTER ITEM 3, THE FOLLOWING ITEM:

- "4. RHINOCEROS HORN, WORKED, - UNWORKED OR PREPARED AND - WASTE AND POWDER OF THIS - PRODUCT	IMPORT & EXPORT."

MADE THIS 17TH DAY OF OCTOBER 1986.

NGIAM TONG DOW,
PERMANENT SECRETARY,
MINISTRY OF TRADE & INDUSTRY,
SINGAPORE.

(TD. I. & E. 015/67)

- (TO BE PRESENTED TO PARLIAMENT UNDER SECTION 4 (2) OF THE CONTROL OF IMPORTS AND EXPORTS ACT).
HODG

APPENDIX 3

U.S. Department of State,
Washington, DC, November 3, 1986.

Hon. James Scheuer,
Chairman, Subcommittee on Natural Resources, Agriculture Research and Environment, House of Representatives.

Dear Jim: I reget that I was not able to testify before your Subcommittee on September 25. I am pleased that the hearings so effectively highlighted the critical situation of the rhinoceros and stimulated a number of actions to save this noble creature from extinction. I would like at this time to apprise you of the Department's ongoing efforts in this area.

As you know, the United States imposed a ban on all shipments of wildlife from Singapore the same day you conducted the hearings. Our ban is intended to achieve several objectives including cessation of all trade in rhinoceros products by Singapore and accession by that country to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). We were pleased to learn that on October 24 Singapore issued regulations prohibiting all trade in rhinoceros horn and have requested copies of them. Singapore also has informed us that it will join CITES by the end of the year.

We are working closely with the Government of Singapore, the U.S. Fish and Wildlife Service, and the CITES Secretariat to ensure that new Singapore measures are effective. In particular, we are urging Singapore to join CITES without reservation.

The wildlife ban was partially lifted October 9, on a temporary basis, to allow the importation of non-endangered tropical fish. We will review the situation in January 1987 to determine if the ban should be reimposed in full. We are hopeful, of course, that actions by Singapore will enable us to lift the ban fully even before then.

We have again approached the Government of North Yemen regarding rhinoceros horn imports. Ambassador Rugh expressed our concerns to the Minister of Economy, Supply and Trade on October 18. The Minister described the illegal trade in smuggled horn as part of a larger problem the government has not been able to solve and agreed to meet with Dr. Esmond Bradley-Martin when he visits in December. The Department intends to ask the Ambassador to accompany Dr. Martin on that call.

The Fish and Wildlife Service has received an informal request for assistance by an official of the Zimbabwean Wildlife Service for the loan or grant of a helicopter with which to combat rhino poachers. Rhino poaching is reaching crisis levels in the Zambezi River Valley. We are currently pursuing this with other U.S. government offices and have informed the Zimbabwean official of the necessity of receiving a formal request from his government.

Lastly, we informed our Embassy in Beijing of your upcoming visit and have asked for the Embassy's assessment of the current Chinese trade in and consumption of rhino horn and its products. My staff will provide George Kopp with that information as soon as we receive it.

If I can be of any further assistance, please feel free to contact me. I congratulate you on your efforts to save the rhinoceros and wish you a successful trip.

Sincerely,

Richard Elliot Benedick,
Deputy Assistant Secretary, Environment, Health and Natural Resources.

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